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Elkington & Co. and the Rapture of Travel, 1841-1961

Alistair Grant

Introduction

The first part of this essay outlines the key technical discoveries of the 1840s that made the large-scale manufacture of Elkington & Co.'s electro-plated and electro-gilded base-metal flatware and cutlery possible. The second part describes how, throughout the company's lifespan, Elkington's brand identity, corporate image, and commercial success depended on extensive orders of flatware and cutlery from an ever-expanding, global travel industry, particularly the great British shipping companies. This essay will show how it was in the dining saloons of ships, trains, and hotels that Elkington maker's mark became synonymous with the Victorians' 'rapture of travel.'

Two spoons and a fork used by British shipping companies, now in the National Maritime Museum at Greenwich, will allow us to reflect on 120 years of electro-plated and electro-gilded flatware, from 1841-1961. Such flatware was used by the Victorian shipping companies to evoke an illusion of luxury travel in the style of a Grand Tourist for the burgeoning middle-classes, which were increasingly travelling and

emigrating to British colonies overseas. Most Britons thought of Australia as a remote convict colony until early April 1852, when six ships carrying eight tons of gold from Mount Alexander arrived on the River Thames. The discovery of new sources of gold has exerted a powerful 'get-rich-quick' attraction throughout history, but following so soon after millions of people in Britain had witnessed the materialist cornucopia of the Great Exhibition over the summer of 1851, the Victorian gold rush induced multitudes of hopeful emigrants to board ships bound for Melbourne, and join one of the greatest mass migrations in history.

A Modern Message

In 1844, Elkington & Co. published *On The Application Of Electro-Metallurgy To The Arts*, a short treatise that explained their new technical process of electro-plating. "The principle is perfect," they wrote, "and the manipulation so simple, that with ordinary care the process cannot fail."¹ Their confident air signified how far the application of the art of electro-metallurgy to plating and gilding base metal articles had developed

Fig. 1 "Thames 1842," a 50-cent stamp issued on 8th April 1974 as part of the "Mail Boats" series of Jamaican stamps. The *R.M.S.P. Thames* was built by William Pitcher at Northfleet, and fitted with steam engines manufactured by Maudslay, Sons and Field of Lambeth. It was launched on the 20th May 1841, and completed December 1841. Image courtesy of Colnect, Catalog code: Michel JM 382. See: http://colnect.com/en/stamps/stamp/376593-„Thames“_1842-Mail_Boats-Jamaica



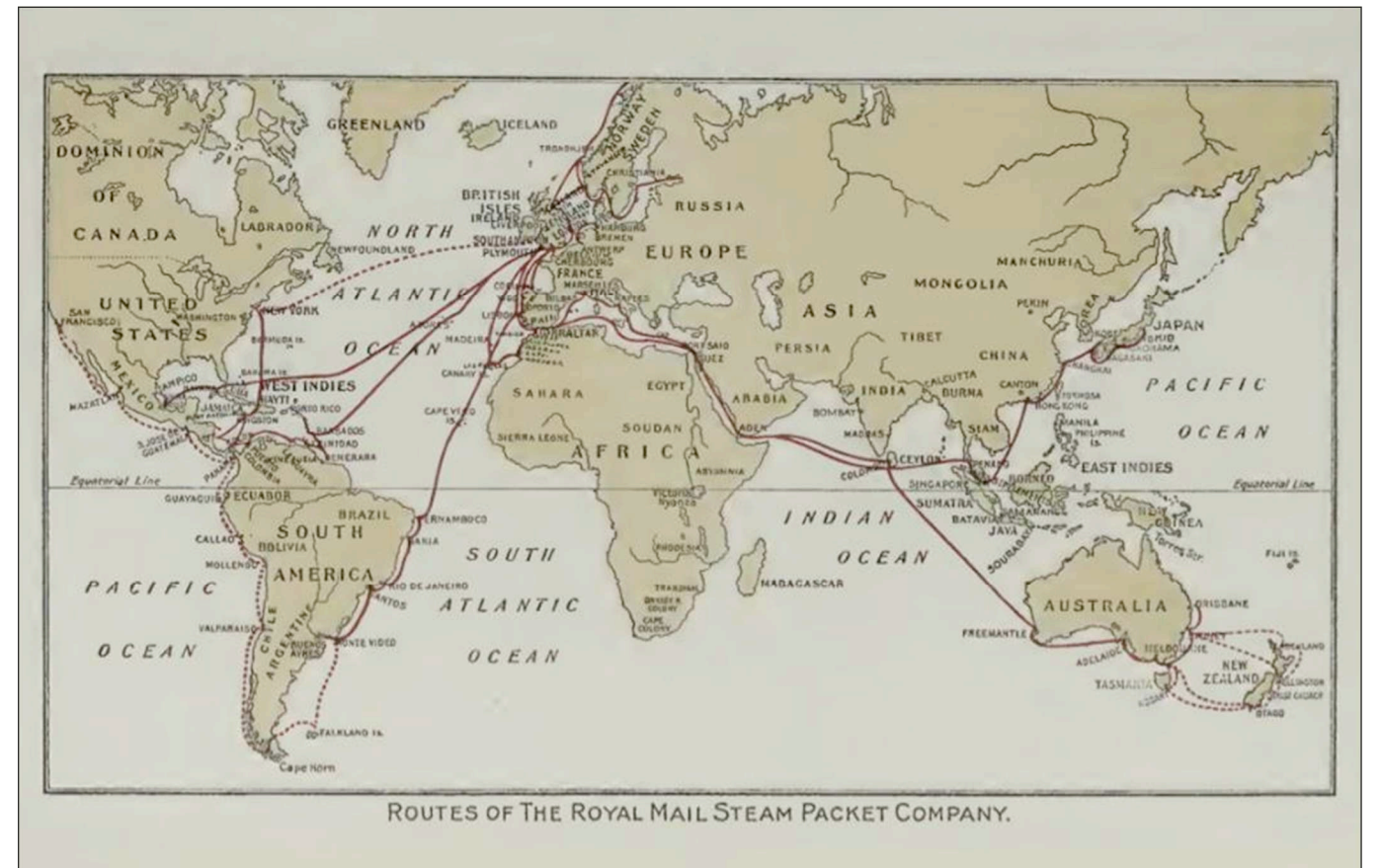
since they applied to patent their method on 25th March 1840.² In just four years, the new technology had already begun to supplant many vested interests in the metalwork trade. Some, whose livelihoods were threatened, voiced reproachful objections. To counter this, the firm apprised the public of the large orders they had received from the new steamship companies, with the aim of transforming the public perception of electro-plate from a technological novelty into consumer confidence in the durability of the new modern mode of manufacture. "...those interested in opposing the progress of this art have not been slow in urging as an objection, what may be said of every new invention, that it has not experienced the test of time - but to this we reply by referring to the first extensive order we received, viz., in 1841, for the supply of the Steam Vessels of the Royal Mail Steam Packet Company - these goods, including the whole supply of forks and spoons, are much approved, and have already endured a wear equal to 9 or 10 years in domestic use."³

In 1838, *The Great Western Steam Ship Company* began operating the first regular transatlantic steamer service to America. Soon afterwards a group of businessmen with interests in the West Indies, led by James MacQueen, decided to found a shipping line to carry mail to-and-from England. The government

agreed that a regular mail service to-and-from the British West Indies delivered by a modern fleet of steamships, which could act as a naval auxiliary in times of war, would benefit the national interest and gave the company a large subsidy of £240,000 per annum. On 26th September 1839, Queen Victoria granted *The Royal Mail Steam Packet Company* (RMSP Co.) a Royal Charter of Incorporation, and the following year an agreement was signed with the Admiralty to build a fleet of 14 steam vessels, which were all named after British rivers.⁴ They were to sail twice monthly carrying the mails between Britain and the West Indies. The wooden paddle steamers were to be capable of being fitted with the largest guns then in use by the Royal Navy, so that they could be converted into naval frigates in the event of war. By 1842, a total of 17 paddle steamers and two schooners had been commissioned, and Elkington & Co. supplied all of the electro-plated knives, forks, spoons, and other dining sundries for the West Indies mail ships. The new wooden paddle-ships were a modern marvel, and when *RMSP Forth* was launched at Leith shipyard on 22nd May 1841, there were over 60,000 spectators.

The West Indies mail service began when *RMSP Thames* sailed from Falmouth to Barbados on 3rd January 1841 (Fig. 1). *RMSP Tweed* had actually left

Fig. 2 "Routes of the Royal Mail Steam Packet Company," from *A Link of Empire, Or 70 Years of British Shipping; Souvenirs of the 70th Year of Incorporation of the Royal Mail Steam Packet Company*, Royal Mail Lines Limited, London, 1909, p. 72



England ahead of the *Thames*, crossing the Atlantic not as a packet but as an ordinary ship to establish the local inter-island service. The other new vessels followed in fortnightly succession. Voyages departed from Falmouth and returned to the company's headquarters at Southampton. On 10th April 1847, the *Illustrated London News* reported the "Loss of the Steamer "Tweed," and Seventy-two Lives." Both passengers and crew were lost, but there were also seventy-nine survivors. The newspaper reported that the *Tweed* had sailed from Havana, Cuba on the morning of 9th February for Veracruz, Mexico carrying 60 passengers, inter-island mail, and 1115 bottles of mercury (quicksilver), valued at £18,000.⁵

In return for the state subsidy, every vessel carried a naval officer who acted as the agent of the Commissioners in charge of the mails. A servant accompanied every officer. A first-class cabin was furnished at the company's expense for the officer's use, without charge to the Admiralty, and the servant was also carried, or one was provided, at the company's expense. The officer was also provided with a four-oared boat and crew to take him ashore whenever he wanted. Other naval officers travelling as passengers were charged only two-thirds of the first-class fare, which ensured the Admiralty had luxurious, subsidized travel arrangements to-and-from the West Indies.⁶ So, besides fee-paying passengers, Elkington's electro-plate was for the benefit of the Admiralty.

Of the original fourteen paddle steamers commissioned by James MacQueen in 1841, seven were wrecked. *Isis* ran aground and subsequently sank off Bermuda, and *Medina* was wrecked on Turks Island after only a year in service in 1842. *Solway* was wrecked off Corunna in Spain the following year in 1843, with the loss of 35 lives. In 1846, the company began to carry the mails for cities along the western coast of South America, primarily Valparaíso in Chile, by linking with the Pacific Steam Navigation Company in Panama. In January 1851, a further Royal charter was granted for RMSP Co. to begin a monthly mail service to Brazil, Argentina and Uruguay with newer, faster steamers, establishing the first direct mail service between Europe and South America. *Forth* was wrecked near Cartagena, Colombia in 1849. In 1854, the RMSP Co. fleet was used to transport troops to the Crimean War. *Tay* was wrecked near Veracruz, Mexico in 1856, and *Avon* near Colón, Panama in 1863. The other seven steamships had all been superseded and scrapped by 1867. Another Royal charter added yet more routes in 1882, and when it took over the White Star Line in 1927, *The Royal Mail Steam Packet Company* became the biggest shipping group in the world (*Fig. 2*).

A Revolution in Plating and Gilding

Orders for dinner services as extensive as *The Royal Mail Steam Packet Company* had hitherto come only from royal or aristocratic households, and civic guilds, and were usually silver rather than plated ware. In 1841, the convergence of the new age of steam

travel and the art of electro-metallurgy signalled the beginnings of a new kind of corporate patronage. Writing in Paris, just two years later in 1843, Jean-Pierre-Joseph d'Arcet observed Elkington had brought about a revolution in the gilding and plating trade: "Since the previous industrial époque, the art of the gilder has experienced an immense revolution. The immersion-gilding and electro-plate processes used to gild and silver other metals have, in an extraordinary manner, reduced the production costs of gilding, and multiplied and diversified so extensively the resources and the products of this industry that they have to a great extent superseded the former mercury trade, but on a far greater scale."⁷ As d'Arcet was writing, the plated trade was also undergoing a similarly immense revolution.

In 1840, a new patent jointly enrolled by George Richards Elkington and his cousin and business partner Henry Elkington had instigated the commercial and industrial development of the art of electro-metallurgy, which revolutionized the imitation of precious metals. Between June 1836 and September 1840, the cousins' joint activities were focussed on discovering new methods of gilding and plating, and between them they enrolled four separate patents relating to 'gilding', 'coating', 'colouring', 'platinizing', 'covering', or 'plating' various metals and their alloys. However, it was Patent No. 8447, jointly filed on 25th March 1840, and specified six months later, which first described their "...method or methods of coating, covering, or plating certain metals with silver by use of a solution of silver, and further by the use of a solution of silver in connection with the application of a galvanic current..."⁸

On 29th March 1843, Josiah Mason, a hugely successful steel pen manufacturer, joined G.R. and Henry Elkington in their partnership. Mason's financial investment enabled the firm to acquire to a number of collateral patents for inventions and improvements that augmented and protected Patent No. 8447. During the 1840s, G.R. Elkington's skills as a master gilder and toymaker combined with Mason's mass-manufacturing expertise to develop a business organization around a flexible manufacturing system that incorporated various patented methods they had acquired, which revolutionized the mass-manufacture of electro-plated flatware, cutlery, and hollowware.

Leeson's Patent: Enclosing the Commons

On 1st June 1842, Elkington & Co. acquired Henry Beaumont Leeson's Patent No. 9374, which specified numerous improvements to the art of electro-metallurgy. The generic title of the specification, *Improvements in the art of depositing and manufacturing metals and metal articles by electro-galvanic agency, and in the apparatus connected therewith*, signalled its truly voluminous content, which ran to 28 pages and 12 diagrams. Leeson had experimented with 430 different electrolyte solutions. At the time, he was assistant lecturer in chemistry and forensic medicine at St. Thomas's Hospital in Southwark, but, like many medical men of his

generation, he devoted his spare time to experimenting with electro-metallurgy. His specification reads like a journal of years of electro-metallurgical experiments rather than a coherent patent. It claims methods of depositing a huge array of metals and alloys, including platinum, palladium, rhodium, and iridium. It is remarkable that he managed to procure many of the refined metals.

In 1844, G.R. Elkington considered taking legal action against several rival patents that infringed upon his various patent rights. Because of the complexity of Leeson's patent, G.R. Elkington consulted William Grove for his legal opinion. William Robert Grove (1811 -1896) was then the leading legal and scientific expert on matters relating to electrochemistry. He had been made the first Professor of Experimental Philosophy at the London Institution in 1841, and worked as a consulting chemist, but took up professional practice at the bar in 1846. Grove concluded that Leeson's patent "...contained so many alleged inventions that it would be dangerous to rest a case on it, and that while many of Leeson's statements were such that chemists might know and discover by experiment, they were not such as a competent workman could apply without many unsuccessful trials."⁹

Nevertheless, G.R. Elkington concluded that Leeson's specification did contain a couple of ideas that were potentially important improvements in the commercial and artistic application of electro-plating. Section No. 6 of Leeson's specification, which recommended gently agitating either the article receiving the deposit or the electrolytic fluid in which it was immersed to be plated, to obtain a more even deposition, proved commercially important. Gentle agitation during the deposition process gave a richer, smoother surface to electro-plating and electro-gilding, which lowered production costs by lessening the amount of hand finishing by burnishing and polishing required on each article.

Section No. 9 of Leeson's specification also described an important preparatory technique that became known as *quicken*ing, or, more colloquially, *quicking*. This involved immersing articles in a solution of "cyanide of potash and mercury" to clean the surface of the base metal. This greatly increased the adhesion of silver to copper and its alloys, including the widely use copper-nickel-zinc alloy known then as German silver. *Quicken*ing made electro-deposits far more durable, which was the key to convincing a skeptical public that electro-plating was more robust and longer lasting than fused-plating, and a more credible way to imitate real silver. Writing in 1844, the company described the main advantages of electro-plating, and stated: "The junction of the plating with the metal below, by the Electro-process is perfect, without the presence of any intervening substance; the forks and spoons thus made are not open to objection, and are found to answer all the purposes of Silver, in sound, appearance, and wear..."¹⁰

In June 1842, G.R. Elkington decided it was essential to acquire Leeson's patent primarily because

the sheer number of potential electrolyte solutions that it listed precluded their use in any rival patent claims. For a short time after he acquired the patent, Elkington employed Leeson temporarily as a consultant chemist, and whilst Leeson was working for him, on 25th March 1843, G.R. Elkington persuaded Leeson to obtain a controversial Memoranda of Alteration to his patent, which substituted in one crucial passage the word "sulphite" for "sulphate."

The Magneto-Machine

Thomas Prime's "GENERAL PLATING MANUFACTORY" was on Northwood Street in Birmingham. In the 1843 edition of George Shaw's popular *Manual of Electro-Metallurgy* is an advert for Prime's "PATENT MAGNETO PLATE WORKS."¹¹ It proudly announces, "The deposition is effected by Magnetic Machinery of the most perfect description, certain and uniform in operation, an effect that cannot be obtained by the Galvanic Battery and other agencies employed in the Electro mode." Prime's plating factory was the first to apply a magneto-electric machine to commercial manufacturing purposes. It had been built in 1844 to the design specifications of John Stephen Woolrich (1821-1850), the precocious twenty-three year-old son of John Woolrich, professor of chemistry at Birmingham's Royal School of Medicine. J.S. Woolrich's magneto-machine was a key development in the mass-manufacture of electro-plate. Woolrich, father and son, later claimed to have been experimenting with electro-metallurgy together since *circa* 1834, but it was the patent that they worked on together and filed in the son's name on 1st August 1842, when J.S. Woolrich was only 21 years old, which was their most important contribution to the art of electro-metallurgy. Patent No. 9431 for *Coating With Metal The Surface Of Articles Formed Of Metal Or Metal Alloys* was the first to specify the use of a magneto-electric machine for electro-plating. J.S. Woolrich was granted his patent in the summer of 1842, but it wasn't until 1844 that Prime built and began operating the first commercial machine, which differed from Woolrich's specification.

In their *Dictionary of Birmingham* of 1885, Harman and Showell suggested that J.S. Woolrich resented G.R. and Henry Elkington because he believed that his father had prior claim to being "...the first person that deposited metals for a practical purpose by means of a galvanic battery."¹² Despite his supposed animosity for the Elkington cousins, correspondence in the V&A Archives reveals that Woolrich entered into negotiations with them around the 24th January 1843, many months before he approached Thomas Prime.¹³ Inexperienced in business, the younger Woolrich turned to the German nickel manufacturer Charles Askin to act as a business advisor and intermediary. In February 1843, G.R. Elkington was taken by Askin to see Woolrich's magneto-electric machine in action. However, Elkington left unconvinced, feeling that, without a lot more development, the machine was no more efficient and economical than batteries for

commercial plating. Woolrich decided to build a bigger machine, which Askin called “the Leviathan magnet,” to convince Elkington of its potential compared to the batteries in commercial use.

Then, on Saturday 1st April, Woolrich wrote and offered to sell his patent for the colossal sum of £15,000. He gave Elkington “until Tuesday next to decline or accept my offer.” Whether it was naïve bravado, or an ill-considered April Fool’s joke, it was given short shrift by G.R. Elkington, who declined the offer, and wrote to Askin saying, “The real value of the process is yet unproved, while the sum demanded is very large.” Elkington reminded Askin that he had twice asked for an experiment “upon a considerable scale under our own direction” so he could see if “we are justified in hazarding a fortune.” However, a more threatening note was struck in Elkington’s suggestion that Woolrich’s patent may actually be an infringement of one or more of their patents. Askin tried to diffuse the tension, but Elkington broke off negotiations with Askin and Woolrich in October 1843. Shortly before then, Woolrich began negotiations with Thomas Prime.

Elkington’s concern was never primarily about the strength and efficiency of the machine, but about whether Woolrich’s methods infringed his own. He sought legal counsel from his London solicitor, Francis Philip Hooper of *Watkins & Hooper*, attorneys, at 11 Sackville Street, London. Hooper in turn consulted with William Grove. Elkington’s contention was twofold; firstly, that his patent claimed the use of electricity for plating and gilding in general, but especially in connection with particular salts, or analogous salts, in which case, if Woolrich, or anyone that used his magneto for electro-plating, and used cyanide solutions or any of the 430 analogous salts specified in Leeson’s voluminous patent, which he now owned, it would be a legal infringement. Woolrich however, was canny and specified a silvering solution comprising “sulphite of silver dissolved in excess of sulphite of potash,” and a “gilding liquor” of “oxide of gold dissolved in excess of sulphite of potash” in his patent,¹⁴ which were not, initially at least, amongst those listed in Leeson’s specification.¹⁵

Silver can be successfully electro-deposited using cyanide, sulphate, sulphite, or hyposulphite solutions. Apart from Wright’s cyanides, the most practical means of electro-plating uses an analogous solution containing sulphite or hyposulphite of silver. Remarkably, neither sulphite nor hyposulphite were mentioned among the 430 solutions specified in Leeson’s patent. To counter any objection to his “magnetic apparatus,” Woolrich cleverly specified the use of a sulphite solution. Leeson’s Memoranda of Alteration, sponsored by Elkington, was a sly, retrospective attempt to invalidate Woolrich’s patent. Woolrich’s improvement laid simply “in the employment of a magnetic apparatus in combination with metallic solutions”¹⁶ rather than the voltaic chemical reaction of a constant battery. It was clear that although more research and development was needed, Woolrich’s magneto-machine had the potential to greatly increase the scale and speed of

production of electro-plating and electrotyping.

In 1853, John Percy revealed that the Memoranda of Alteration to Leeson’s patent was entered on 25th March 1843, after Woolrich had enrolled his patent, and was a deliberate, and, in Percy’s view, scurrilous ruse to invalidate Woolrich’s claim to the use of sulphites as a solution. “But for sulphite of silver, Woolrich’s invention would have been of no avail; for Elkington had previously obtained patents for the electro-deposition of silver by means of the voltaic current, and for the use in connection therewith not only of the alkaline cyanides as solvents of silver, but of about 430 additional salts!”¹⁷ Woolrich actually later took out a license from Evans to use his own invention and established a Magneto-Plating and Gilding Works on Great Charles Street, but died, aged only 29, on 27th February 1850.

When the journalist George Dowd wrote about Elkington’s Newhall Street factory for the *Penny Magazine* in 1844, Elkington & Co. were still using a modified, multi-celled version of William Hyde Wollaston’s battery. Five years later, in a statement to the annual meeting of the *British Association* at Birmingham in 1849, G.R. Elkington stated, “...he had up to that time never been induced to give up the ordinary battery in favor of magnetism or any other suggested improvement.”¹⁸

Elkington did not obtain the rights to use Woolrich’s patent until 26th May 1845, after Woolrich had sold the patent to Charles Askin’s business partner, Brooke Evans. It is notable that *Evans & Askin* acquired the rights to Woolrich’s patent, because as Britain’s leading manufacturers of German silver the capacity of the magneto-machine to facilitate large-scale electro-plating of flatware and cutlery was of enormous potential benefit to their trade. Elkington & Co. agreed to pay Evans £100 up front and £400 per annum for the remaining term of the patent,¹⁹ although they did not put it into commercial operation until 1847. In the late 1840s, William Millward, Elkington’s chief ‘dipper,’ as the men that operated the plating vats were known, improved the magnet design.—Elkington also obtained the rights to Edward Augustus King’s 1845 patent for improving the armature that revolved in front of the magnet, which greatly increased the rates and scale of deposition. The magneto-machine made it possible to electro-plate or electrotype multiple articles in vats at the same time, not only in silver and gold, but also copper. Woolrich’s patent specified the use of his “magnetic apparatus” with a “coppering liquor” comprising “carbonate of copper dissolved in excess of sulphite of potash,”²⁰ which also made the electrotyping of large-scale works of art possible.

Starr Light

Edward Augustin King was an American who filed for British Patent No. 10,919 on 4th November 1845, which was enrolled on 2nd May 1846. Although it was taken out in King’s name, the patent specified the invention of John Wellington Starr, a brilliant young electrician from Cincinnati, who had developed an

incandescent ‘Electro Magnetic Light.’ Along with another associate, John Milton Sanders, Starr and King formed a joint stock company in Ohio and came to London to secure a British patent and develop Starr’s invention. They sailed for Liverpool on 17th February 1845, on the sailing packet *Oxford* of the Black Ball Line. However, Starr tragically died of *Phthisis Pulmonalis* (tuberculosis) on 21st November 1846 at his lodgings at 29 Newhall Street, Birmingham aged just 25.²¹ He was buried in the nonconformist Key Hill Cemetery (Birmingham General Cemetery) in Hockley, the Jewellery Quarter of Birmingham.

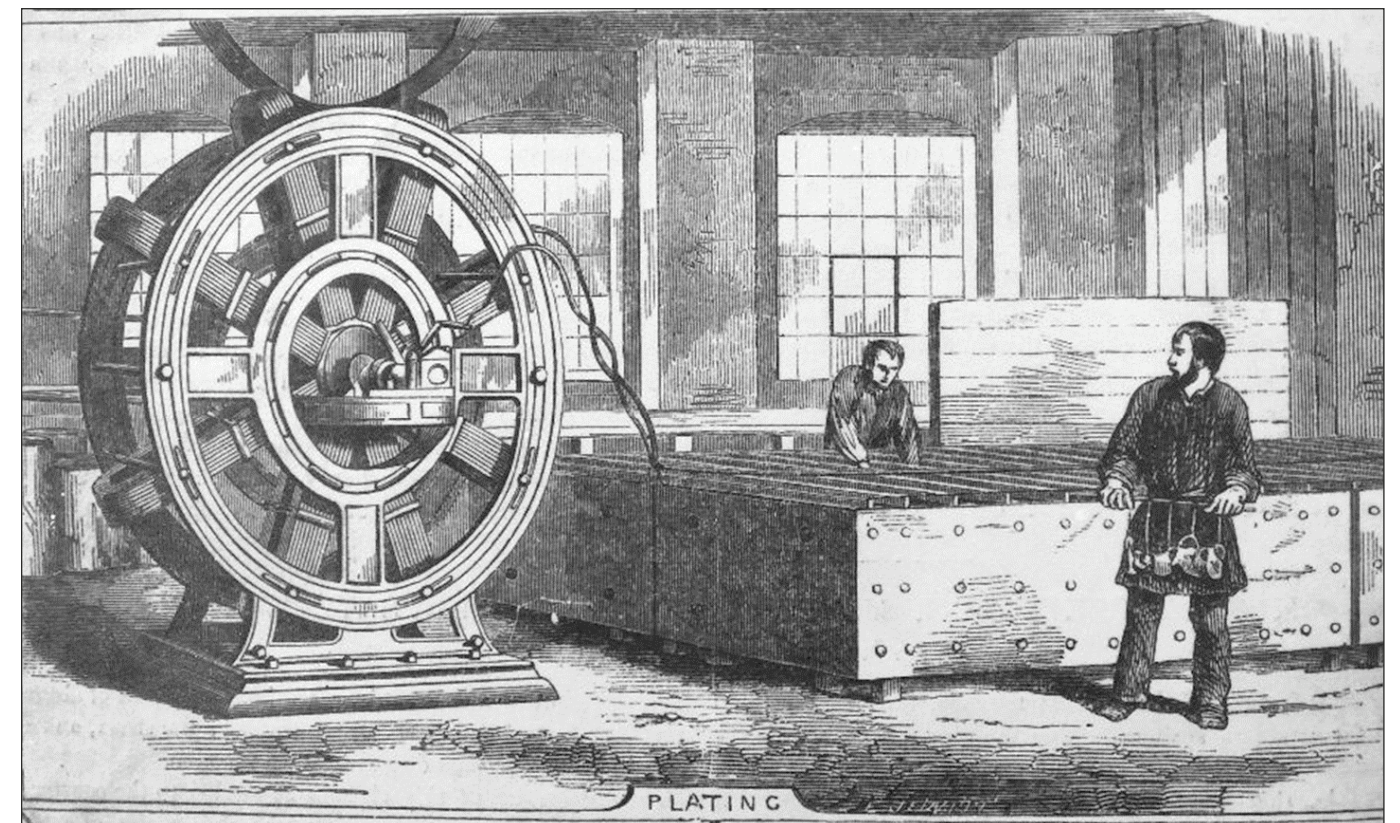
Starr went to Birmingham to find a manufacturer to help fund the commercial development of his electric light, and established a relationship with the lamp-maker John Bolton. When Starr died unexpectedly, Bolton paid for his burial. Whether Starr also met with J.S. Woolrich, Thomas Prime, or G.R. Elkington in Birmingham is unknown, but Starr’s invention was widely known because on 25th April 1846, *The Mechanics’ Magazine* published a detailed three-page article and diagram titled “King’s Patent Electric Light.”²²

In 1877, the science writer William Mattieu Williams (1820-1892) revealed that Starr also went to Birmingham to construct a magneto-machine to power his light.²³ In 1845, Williams was an electrical instrument maker and electrotyper in Hatton Garden, and had assisted Starr in his experiments by

constructing a large battery. Williams recalled, “... the result of our battery experiments was to convince Mr. Starr that a magneto-electric arrangement should be used as the source of power in electric illumination; and that he died suddenly in Birmingham in 1846, while constructing a magnetic battery with a new armature which, theoretically, appeared a great improvement on those used at that date.” E.A. King applied for a further British Patent, No. 11,188, on 30th April 1846 for an electro-magneto machine co-designed by Starr and Sanders. The patent was enrolled on 30th October 1846, a month before Starr died, and it was this second patent to which Elkington & Co. obtained the rights.

Within a few months of securing the rights to Woolrich and King’s patents, Elkington had constructed a gigantic magneto-machine capable of mass electro-plating flatware, cutlery, and hollowware, or electrotyping life-size copper busts and statues. By the early 1850s, they were styling themselves ‘bronzists,’ as well as electro-platers. Elkingtons’ magneto-machine was first depicted in an article in the *Illustrated Exhibitor and Magazine of Art* in 1852. The engraving reveals just how large it was (*Fig. 3*). Another engraving appeared the following year in James Sheridan Muspratt’s *Chemistry, Theoretical, Practical and Analytical*. The later image shows that it was situated in the main plating shop at Elkington’s Newhall Street manufactory in Birmingham (*Fig. 4*).

Fig. 3 This illustration shows the scale of the magneto-machine that Elkington & Co. began operating in their Newhall Street manufactory in Birmingham in the early 1850s. “Plating,” *The Illustrated Exhibitor And Magazine Of Art: Collected From The Various Departments Of Painting, Sculpture, Architecture, History, Biography, Art-Industry, Manufactures, Inventions And Discoveries, Local And Domestic Scenes, Ornamental Works, Etc., Etc.*, Volume 1, John Cassell, London, 1852, p. 296.



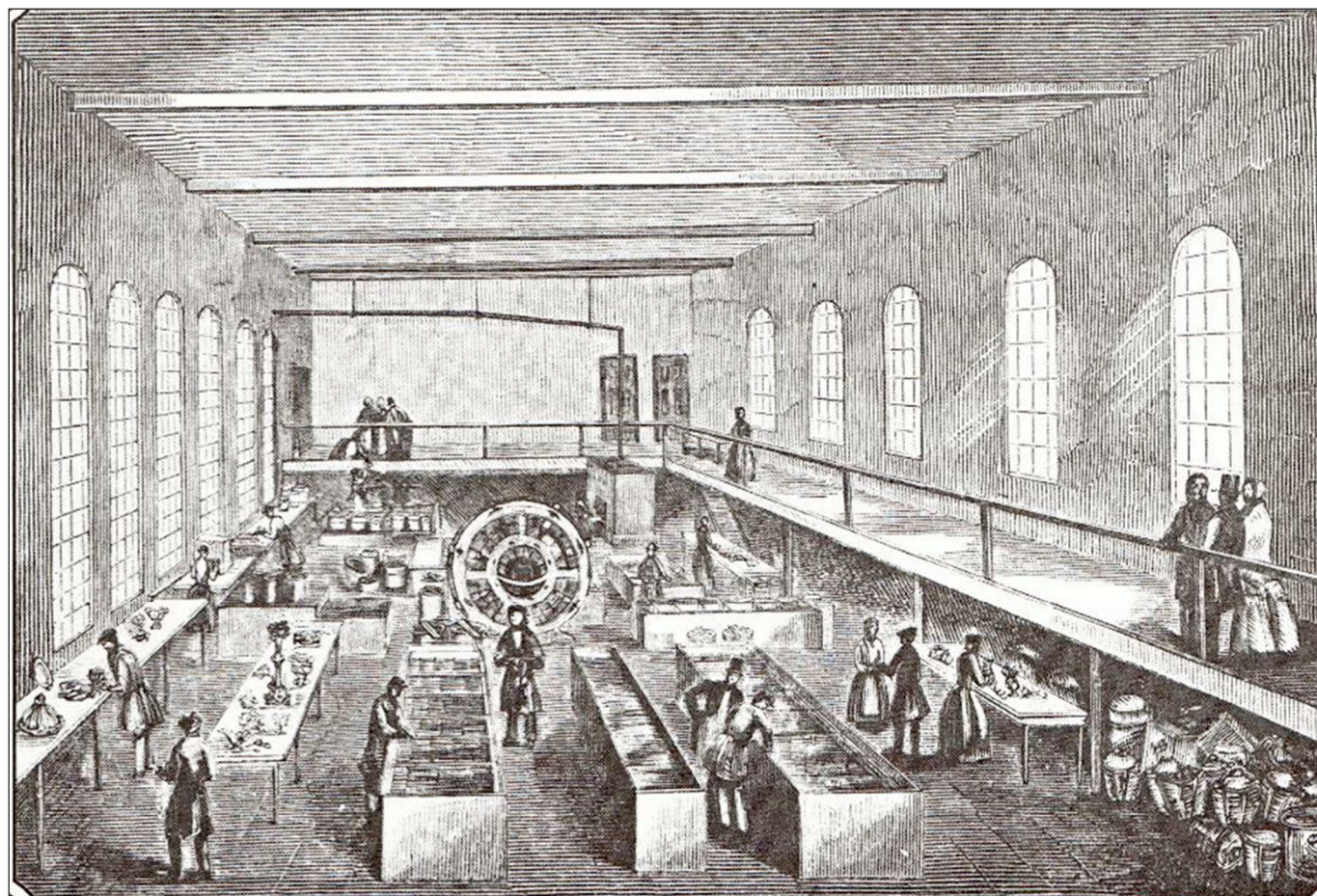


Fig. 4 This illustration depicts the plating shop at Elkington & Co.'s Newhall Street manufactory in Birmingham in the early 1850s, showing the plating troughs and magneto-machine, with visitors looking down from the balcony on guided factory tours. Illustration from James Sheridan Muspratt, *Chemistry, Theoretical, Practical and Analytical As Applied And Relating To The Arts And Manufactures*, Volume 1, William Mackenzie, Glasgow, Edinburgh, London, and New York, 1853, p. 815.

Millward's Bright Plating

On 11th March 1837, five members of the Millward family, Richard, William, Seedney, Mary, and Eliza, who were one of the leading gilding families of Birmingham,²⁴ all agreed to give up their own well-established business to work for G.R. Elkington at his gilding works in St. Paul's Square. A Memorandum of Agreement for seven years service states that it was "... the superiority and advantage of the invention or new method of gilding"²⁵ that convinced the Millwards. Elkington's patented process of immersion-gilding did not involve volatilizing mercury, which was devastating to the health of many mercury gilders by causing 'gilder's palsy.' The following year, on 28th November 1838, the Millwards moved into the new gilding works that G.R. Elkington built on Newhall Street, between the towpath of the Birmingham and Fazeley Canal and Charlotte Street.

In William Henry Millward, Elkington acquired one of the trade's most talented and experienced journeymen gilders, and he quickly became the firm's chief plater and gilder. From 1837, Millward operated the immersion gilding process Elkington had patented the previous year, until *circa* 1840-41 when he began operating the new electro-gilding and electro-plating process.

In 1847, Millward discovered and patented an important improvement, which significantly lowered the production costs of mass manufactured flatware and holloware. It was a particularly timely discovery that reduced the labour involved in finishing the intricate patterns and ornamental motifs of the popular styles of naturalism, and the exuberant designs of the Rococo revival of the late 1840s and early 1850s.

Millward's Patent No. 4346 of 23rd March 1847, was also the first to specify the use of an additive in the electro-plating process. Carbon disulfide (CS_2), which was then known as 'bi-sulphuret of carbon' became widely used in alkaline silver cyanide solutions to affect what became known as *bright plating*. Millward first made the discovery whilst operating the plating troughs at the Newhall Street manufactory.

As Elkington's chief 'dipper' it was Millward's job to oversee the electro-deposit of copper, gold and silver into the wax and resin elastic moulds patented by Alexander Parkes, the head of Elkington & Co.'s casting department, which were used for electro-depositing figures, intricate reliefs, and undercut ornamental motifs.

Before being immersed in the plating troughs, Parkes' method specified that the moulds were dipped in a solution of phosphorus contained in bisulfide of

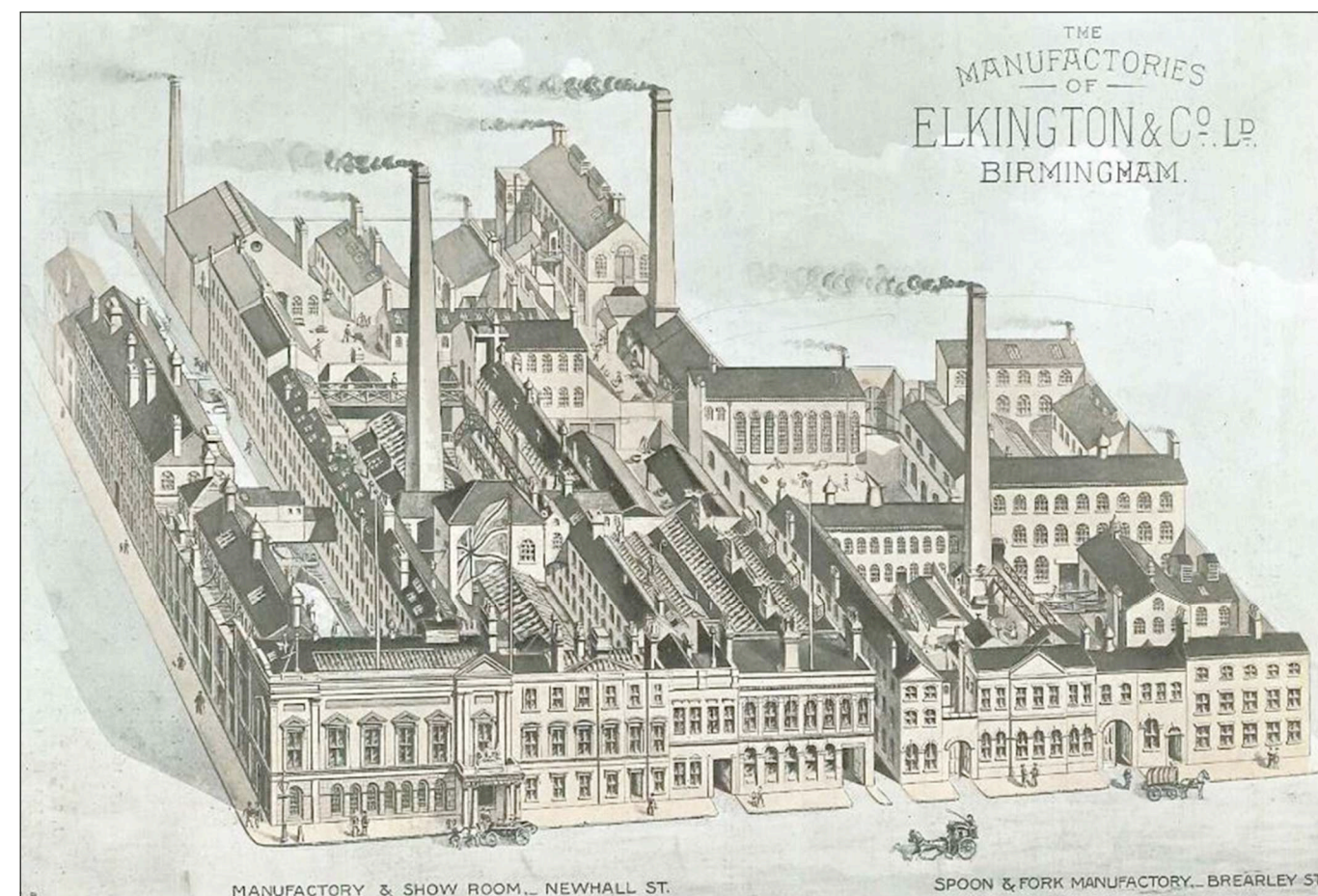


Fig. 5 This illustration, "The Manufactories of Elkington & Co. Ld. Birmingham" is from Elkington & Co.'s sales catalogue of circa 1904. It shows the company's two Birmingham manufactories, which although in reality they were just over a mile apart, are combined in this image to emphasize the scale of Elkington & Co.'s operations. The spoon and fork manufactory in Brearley Street is on the right hand side of the picture, and the Newhall Street electro-plating and electro-gilding manufactory and showroom is on the left.

carbon, and then in nitrate of silver. Millward noticed that when the wax and resin moulds coated with carbon disulfide and phosphorus were placed in the silver cyanide solution other articles that were being electroplated at the same time acquired a silver deposit that was bright and almost perfectly polished in appearance. Moreover, the surfaces of the articles closest to the wax moulds were those with the brightest electro-plating.

Millward began experimenting by adding different amounts of carbon disulfide as an additive to the electro-plating solutions. This resulted in his joint patent with Morris Lyons titled, *Improvements In The Solutions Employed When Depositing Metals By Means Of Electric Currents* of 23rd March 1847: "Bi-sulphuret of carbon is added, in certain proportions, to the electro-depositing solution. This addition, properly performed, and made from time to time, causes the deposited metal to be bright, instead of crystalline, as is ordinarily the case..."²⁶ Millward's bright plating greatly reduced the amount of time and effort spent in burnishing and polishing to finish electro-plated articles. It would be interesting to know what Mary and Eliza Millward thought of William's labour-saving invention, because women were employed mostly in finishing electro-plated articles.

Siemens' Smooth Plating

By the late 1840s, Elkington, Mason, & Co.'s factory on Brearley Street in Birmingham had become the commercial hub of the business, rolling sheets of German silver and stamping-out knives, forks, and spoons, which were then transported on barrows less than a mile down Summer Lane, Old Snow Hill, and Lionel Street to the vast manufactory on Newhall Street where they were electro-plated (*Fig. 5*). Elkington combined Millward, Leeson, Woolrich, and Starr's inventiveness into large-scale, commercial electro-plating. However, the final technical elements in Elkington's success came from Germany with the acquisition of C.W. Siemens patented method of depositing a smoother plated surface, and Hermann Krupp's design for a machine that rolled and cut flatware patterns from large sheets of German silver.

Like thousands of young science students in the late 1830s and early 40s, Carl Wilhelm von Siemens and his brother Werner were fascinated by the discovery of the electrotpe process. When they lost both parents in 1840, they found themselves in need of money to allow their younger siblings to complete their education. On 10th March 1843, Carl Wilhelm von Siemens came to England hoping to sell the method of electro-gilding that his brother Werner had developed. The patent

agents *Poole & Carpmael* gave him a letter of introduction to G.R. Elkington. After a tour of the Newhall Street factory, Siemens went back to *Poole & Carpmael* in London to study Elkington's various patents, where he was disappointed to discover that his brother's hyposulphite solution had been mentioned in the Memoranda of Alteration to Leeson's patent "...although in a manner that would hardly have sufficed to enable a third person to obtain practical results."²⁷

Ever open to new talent and ideas, G.R. Elkington invited Siemens to return to Birmingham if he still felt there was anything new he could offer to the electroplating process at Newhall Street. Siemens returned to Birmingham where he met with Elkington and Mason to demonstrate that his brother's process was "...able to deposit with a smooth surface 3 dwt.²⁸ of silver upon a dish cover, the crystalline structure of the deposit having heretofore been a source of difficulty."²⁹ Mason paid Siemens £1,490, enabling him "...to return to my native country and my mechanical engineering [training] a comparative Cræsus."³⁰

Werner von Siemens acquired his first Prussian patent for galvanic gilding and silvering on 29th March 1842, and by December had established the first electro-plating and gilding works in Germany in partnership with the *neusilber* manufacturer *J. Henniger & Co.* He later recalled: "I had experimented with all the gold and silver salts known to me, and besides the hyposulphites had also found the cyanides suitable. The patent however was only granted me for the former, as in the meantime Elkington's English patent for the employment of the cyanide salts had become known. Notwithstanding the beautiful gold and silver precipitates obtainable from hyposulphite salts, the cyanide salts have in the long run kept the field, their solutions being more constant."³¹ Given the timing of Leeson's Memoranda of Alteration on 25th March 1843, it seems likely that, notwithstanding the considerable sum paid to operate his process, the belated, general inclusion of sulphite salts was possibly also aimed at invalidating Werner von Siemens' patent rights in England as well as those of J.S. Woolrich.

Krupp's Spoon-Rolling Mill

On 26th August 1846, Alfred Krupp took out a patent in England for the spoon and fork rolling mill that his brother Hermann had developed in 1841. On a second trip six months later to enroll the specification he travelled to Birmingham with a letter of introduction to Josiah Mason from his friend C.W. Siemens. Mason acquired from Krupp some large hardened-rolls for the manufacture of steel sheet for pens at his Lancaster Street works. Krupp had already established successful spoon rollers in partnership with the Austrian Alexander von Schoeller at Berndorff near Vienna in 1843, and for Werner von Siemens's partner *J. Henninger & Co.* (later *Berliner Metallwarenfabrik Jürist & Co.*) at their *neusilber* works at Berlin. In 1844, he had also established a spoon roller for Maximilian de Beauharnais, 3rd Duke of Leuchtenberg, who paid 20,000 roubles to install it at his *St. Petersburg*

Electroforming, Casting and Mechanical Plant. Nevertheless, it was not until 1851 that Elkington & Co. decided to invest in Krupp's spoon-rolling mill at their Brearley Street works in Birmingham.

In December 1851, *The Journal of Design and Manufactures*, edited by Henry Cole, reported: "...we have been informed that Messrs. Elkington have become the sole patentees of a new process for the rolling of spoons, forks, &c., from German silver. The invention is a Prussian one. For one pair of rolls, we have learnt, as much as 300/. was given, and the patent right, together with the machinery, cost upwards of 8000/. some idea of the value of the invention may be gathered from the fact that the operation of making a spoon or fork, from the cutting of the blank to the ornamentation of the shank, and the concaving of the mouth, the whole process is completed, with the exception of the removal of a slight "flaze" and the stoning previous to immersion in the silvering solution, by this very useful invention."³² Krupp's spoon-rolling mill was an early flexible manufacturing system in the way that the equipment was used for more than one related purpose. It allowed Elkington to react quickly to shifts in market demand, without altering the quality of the forks and spoons they manufactured. Krupp's mill was designed to roll and stamp production runs of differently shaped blanks. Despite their huge initial outlay Elkington quickly cut overheads by using the same equipment to essentially perform several functions, rolling out the sheet metal and stamping-out production runs of both forks and spoons.

No document survives stating when Elkington & Co. acquired their Brearley Street premises in Birmingham. The place is a shadowy presence that looms large in the company's history because it generated so much of the firm's profits. The only known image of the works is that in Elkington's sales catalogue of circa 1904. John Thackery Bunce attributes the early focus on flatware and cutlery and the acquisition of Brearley Street to Mason. "...Mason saw clearly that for a considerable time the business must largely depend upon productions of a humbler description, in common use, capable of being supplied in any quantity equal to the demand, and of being sold at a comparatively cheap rate. This led to the establishment of a manufactory in Brearley-street, Birmingham, for the production of electro-plated spoons and forks."³³ Throughout the history of the company, Elkington's core business was large-volume contracts supplying electro-plated flatware, cutlery, and holloware to shipping and railway companies; clubs and hotels; civil, military, and educational institutions. On 26th October 1872, George Augustus Sala wrote in the *Daily Telegraph* of the guided tour he had taken around Elkington's Newhall-street factory and showroom, and observed, "A careful survey of these ingenious manufactures, together with some mental reference to social statistics, will not unnaturally lead to the conviction that the most remunerative department of the electroplater's business is connected with the production of spoons, forks, and teapots..."³⁴

E. & Co., Under A Crown, In Every Part Of The World

By July 1852, large contracts for ships had made the company confident enough to claim in the introduction to their *Illustrated Pattern Book*: "THE ELECTRO PLATE has now been before the public since 1841, and after the most severe test of wear in the vessels of the Royal Mail Steam Packet Company, the Peninsular and Orient [Steam Navigation] Company, the General Screw Steam Ship Company, the Pacific Steam Navigation Company, and numerous Club Houses, Hotels, and Private Houses, in every part of the world, continues to give the most unqualified satisfaction, supplying as it does all the advantages of Silver in utility and beauty of effect..."³⁵ The presence of their electro-plated flatware, cutlery, and holloware on the steam packets that linked Britain's global trade and growing colonial empire, and in colonial hotels and clubs around the world, was a perfect way of promoting their products in the export markets to which the ships travelled. Elkington's maker's mark, E & C^o. under a crown symbol in a shield shaped like a Swiss escutcheon, (*Fig. 6*) became synonymous with luxurious travel and colonial refinement, and its electro-

plated surfaces reflected the aspirations and new opportunities open to the middle classes.

One of the opening pages of the July 1852 catalogue was aimed specifically at winning commissions from large colonial institutions, especially in India. "ELKINGTON, MASON & Co. beg too call the attention of the Civil and Military Services, the Mercantile Community, and the East Indian Public generally, to their *Illustrated Pattern Book*, and to the unequalled quality and beauty of design of their *Manufactures*."³⁶ To meet international demand the company began to establish a network of selling agents abroad, who would stock their *Pattern Books* and some samples to show to prospective customers, and relay their orders back to Britain. "In consequence of the large and increasing demand for their ELECTRO PLATE, E., M., & Co. have authorized Messrs. STONE & Co., of Calcutta, to act as their Agents in India, of whom *Pattern Books* and any information can be obtained, and who will afford every facility for the transmission of Orders. A few specimens of their *Manufactures* can also be inspected in Messrs. S. & Co.'s *Pattern Room*."³⁷

Fig. 6 Elkington's maker's mark, registered trademark, and company logo was E&Co. under a crown symbol in a shield, as illustrated in *Notes Of Information For Those Interested In Silver And Elkington Plate*, a booklet printed by Elkington & Co. Ltd and given to customers visiting their retail showrooms in 1923, p. 18-19.

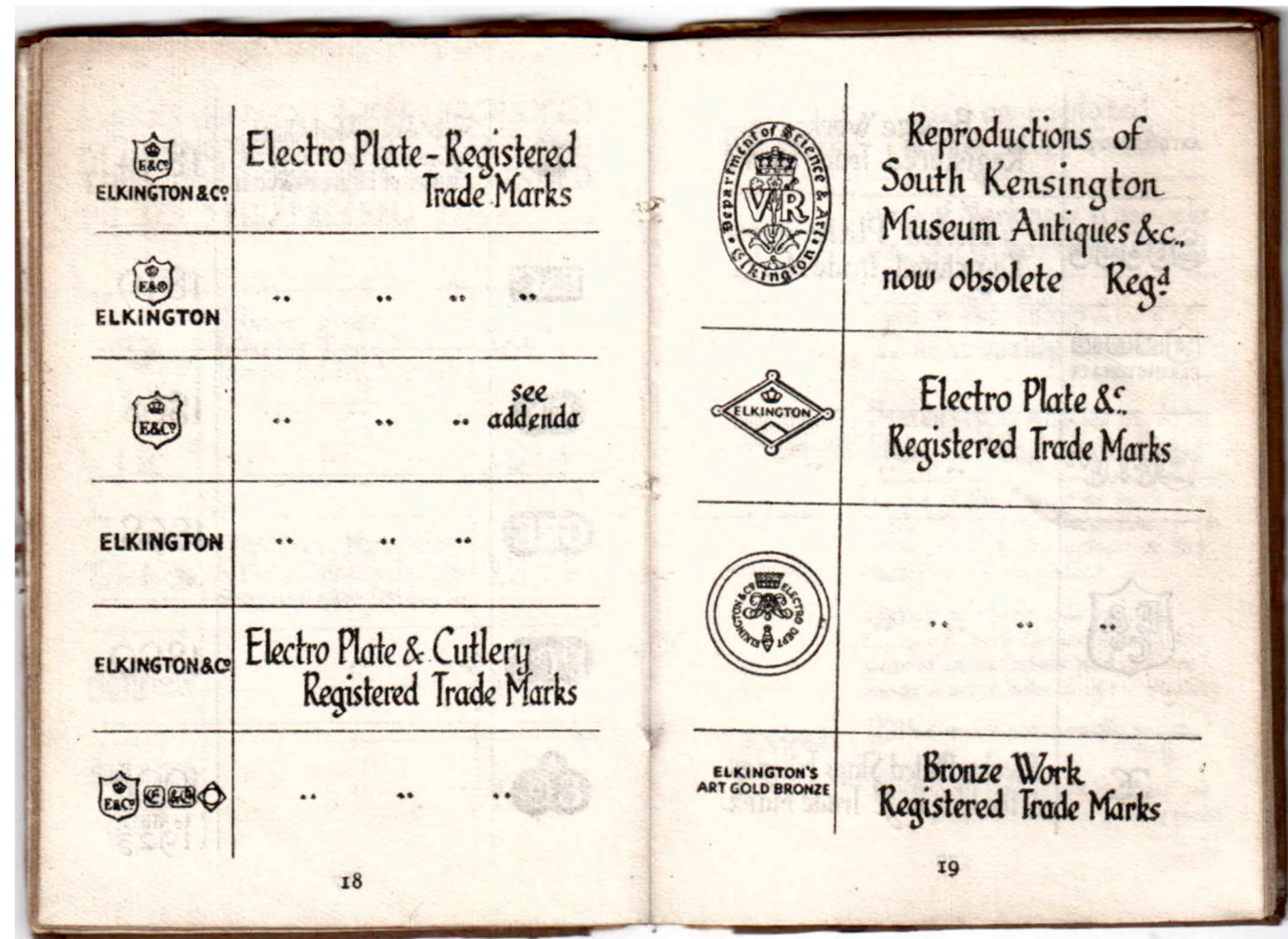


Fig. 7 *left*: Table Fork, electroplated nickel silver, Elkington & Co., Birmingham, 1882, Dim: 25 x 210 x 25 mm, National Maritime Museum, Greenwich, Museum no. PLT0475

Fig. 8 *facing page*: One of numerous designs for flatware and cutlery with Xylonite (plastic) handles in Elkington & Co.'s Brearley Street Pattern Book [1904-1939], Elkington and Company records, Archive of Art and Design, Victoria and Albert Museum, Ref. AAD/1979/3/7/3, p. 53 (*above*) with an example from *Elkington Plate and Silver*, no publisher or date, circa 1920 (*below*)



An electro-plated table fork used on board the *British India Steam Navigation Company* steamship *Pemba*, a passenger and cargo vessel launched in 1877, is in the National Maritime Museum at Greenwich (Fig. 7). It is a plain, unornamented four-tined fork with an engraving on the handle, BISN C° SS PEMBA within a garter. An electro-plate mark on the rear of its handle includes the date letter W denoting the year 1882. The lack of pattern belies the more utilitarian approach to travel on the British Empire's more far-flung, commercial shipping routes, which carried fewer wealthy or socially aspirational passengers.

In 1882, Oscar Wilde embarked on a yearlong lecture tour of America, on a mission to export Aestheticism abroad. The day after he stepped ashore from the *SS Arizona* he announced to the journalists that hung on his every word, "I am here to diffuse beauty..."³⁸ As another British export, the fork has no such social or intellectual ornamental pretension; looking back across the aesthetic sea-change of the 20th-century its complete lack of decoration has an austere modernism to it, and but for a few blemishes in the plated surface it could be made of stainless steel.

From the mid-1850s, Elkington & Co. began supplying the *Calcutta and Burmah Steam Navigation Company*, which was formed in 1856, and which became the *British India Steam Navigation Company* in 1862. The company provided services to the British and Indian governments, notably mail and military contracts, and became one of Britain's largest ship-owners, operating routes from Britain to India, Australia, Kenya, Tanganyika and Zanzibar (Tanzania), as well services from India to Pakistan, Ceylon (Sri Lanka), the islands of South East Asia, especially the Malay

Archipelago, Singapore, Siam (Thailand), Japan, Arabia, East and South Africa.³⁹ The *SS Pemba* was named after Pemba Island, part of the Zanzibar Archipelago off the east coast of Africa in the Indian Ocean. The company's screw steamers were all named after similar exotic-sounding places around the company's shipping routes. By the 1860s, the name Elkington's name and maker's mark was ubiquitous on steamships the world over, and in many of the far-flung places they visited, making it a truly global brand.

By the last quarter of the 19th-century, Elkington's flatware and cutlery sales catalogues and pattern books for their Brearley Street manufactory show that their flatware and cutlery was not only offered in a bewildering variety of designs, but also with a choice of different materials for the handles, silver, sterling silver, electro-plated, African ivory, or best quality Xylonite, which was the world's first thermoplastic. It was invented by Elkington's former employee Alexander Parkes as 'Parkesine' in 1856, which was subsequently improved and renamed Xylonite in 1869. Parkes established the *Parkesine Company* in 1866 with Daniel Spill as works manager. Parkes was one of the greatest ever British electro-metallurgists and materials scientists, but had little business acumen, and his company failed in 1868. Daniel Spill took the stock and coined the trade name Xylonite, from *xylon*, the Greek word for 'wood,' establishing the *Xylonite Company* in 1869. By 1874, that enterprise had also failed, but Spill continued to make Xylonite and established *Daniel Spill & Co.* Spill took on Levi Parsons Merriam (1829-1886) and his son Charles as new partners. Merriam and son were successful manufacturers of combs and imitation jewellery.⁴⁰

In 1877, the company was restyled the *British Xylonite Company*, and reorganized by Merriam's sound business sense, and finally began to prosper: "In the late 1870s, well before the U.S. author J. Whitmore (1908) highlighted use of the modern concept of standard costs, Levi Parsons Merriam, the owner-manager, introduced standard costs at British Xylonite."⁴¹ The *British Xylonite Company* was the first British firm to successfully manufacture and market plastics commercially, and by 1902 the business employed over 1000 people.

The nitrocellulose-based plastic was initially used for making articles in imitation of ivory, horn, and tortoiseshell. Whilst African ivory handles evoked the same exotic sense of colonial luxury as naming a steamship after an island in the Zanzibar Archipelago, Xylonite had a similar aura of technological modernity to electro-plate. It was marketed as a perfect imitation of the real thing in a high quality, durable material. The *British Xylonite Company* supplied Elkington's handles. "The Xylonite used by Elkington & Co. is the finest procurable, almost indistinguishable from Ivory, and very durable" (Fig. 8).⁴²

The Rapture of Travel

In an essay titled 'Eyes And No Eyes,' G.M. Young took John Ruskin harshly to task for using the overwhelming authority of his seductive prose to impose upon the Victorian public an outmoded foreign aesthetic based on his love of travel in the luxurious style of a Grand Tourist. "The truth and the trouble," lamented Young, "was that Ruskin was a Grand Tourist, and below the level of the Grand Tour or the Journey in Pursuit of the Picturesque ... he could not see at all."⁴³ Whether Ruskin was actually responsible for imposing his aesthetic standards on the Victorian public, or became the representative voice of an epoch seduced by new opportunities for faster and more affordable foreign travel is debatable. "Excited, dazzled, and overwhelmed by the rapture of travel, Ruskin excited, dazzled, and overwhelmed his age by the splendour of his language: he imposed his standards of appreciation with the united authority of an artist, a critic, and a moralist."⁴⁴ Whatever the degree of Ruskin's culpability, G.M. Young correctly identified that an overwhelming influence on Victorian aesthetics stemmed from the fact that the Grand Tour, which, prior

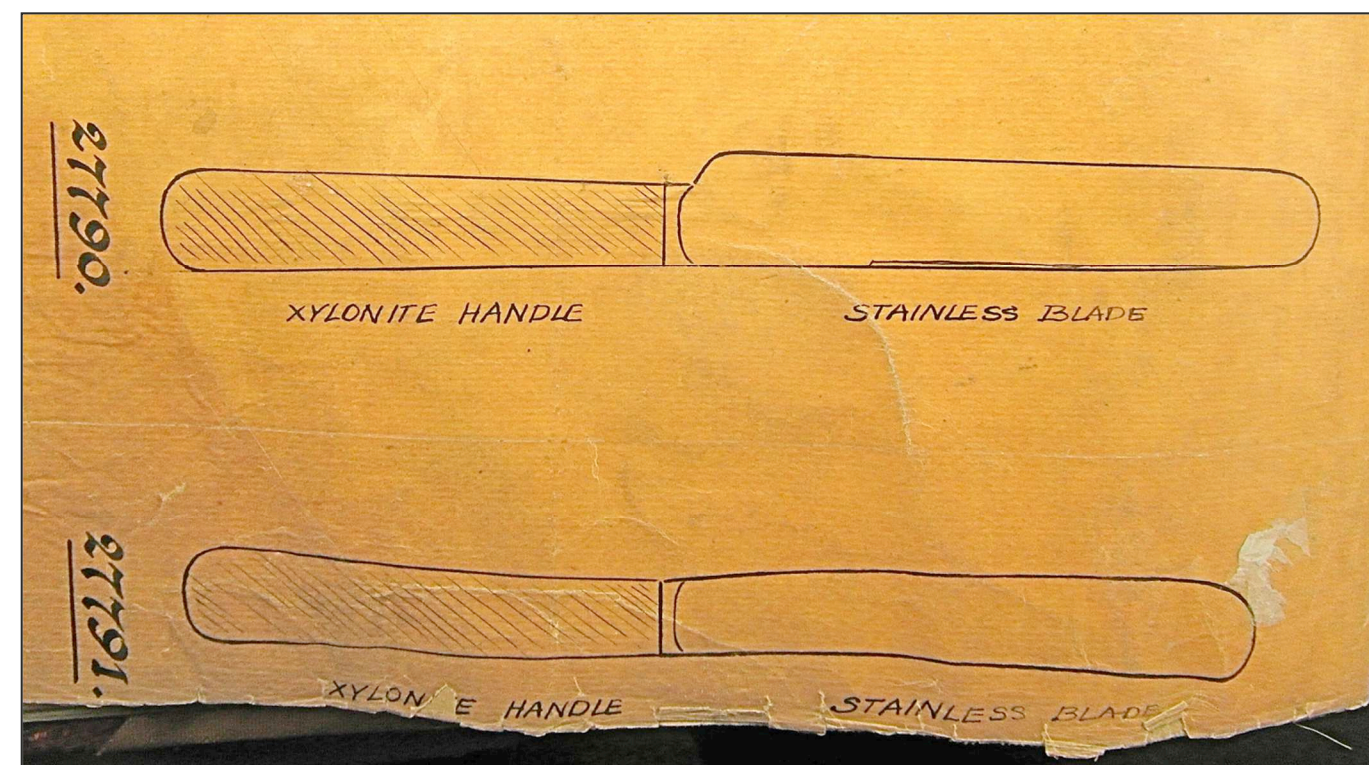


Fig. 9 *right*. Electroplated Teaspoon, Elkington, Mason, & Co., Birmingham, 1852-1864, inscribed, 'Black Ball Line of Australian Packets,' Dim: 15 x 125 x 25 mm, National Maritime Museum, Greenwich, Museum no. PLT0461

Fig. 10 *below*. The basic industrial process used in flatware manufacture

Fig. 11 *facing page*: "Queens Wharf, Melbourne, West End," Samuel Thomas Gill (illustrator), J. Tingle (engraver) in *Victoria Illustrated*, Sands & Kenny, Melbourne, 1857, f. 32



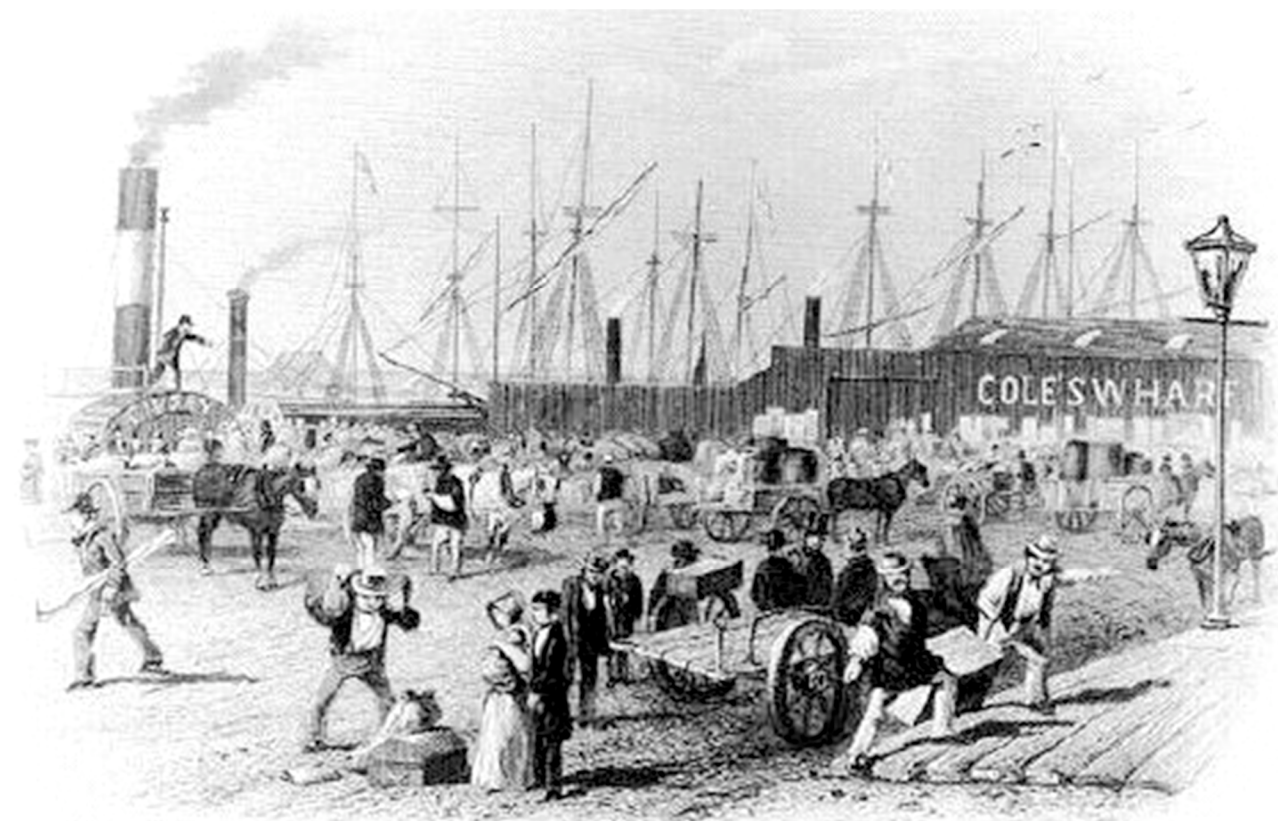
to the Napoleonic Wars, had been the privileged preserve of 18th-century aristocrats and gentleman commoners, was opened by steam-powered ships and trains to a far broader social spectrum. Whether or not the Victorian public, ever eager to be told what they should like, were swayed by Ruskin's critical prose and aesthetic sensibilities, they were, like Ruskin, latter-day Grand Tourists, thrilled by 'the rapture of travel.'

A Gilt Bowl And Threaded Edge

The National Maritime Museum at Greenwich has a sizable collection of decorative plate made by Elkington, including an electroplated teaspoon, loosely dated *circa* 1852-1864 (Fig. 9). Few objects typify the mid-Victorian era better than an electro-plated, nickel alloy teaspoon with a gilt bowl and threaded edge. It symbolizes the dazzling excitement and 'rapture of

travel' felt by Victorians, which for many meant the aspirational lure of financial opportunity and social betterment to be found abroad. Engraved on top of the handle is the name of the shipping line, 'BLACK BALL LINE OF AUSTRALIAN PACKETS.'

The spoon is what antique silverware dealers are still rather apt to label "Queen Anne style," which is as confused in reference to silverware as it is to the Queen Anne revival in architecture by George Devey and Norman Shaw in the 1870s. It bears little resemblance to the style of silver under the last Stuart monarch, and often means any pattern that is perfectly plain except for a thread edge with a flat or slightly raised fluting. In fact, this kind of plain threaded edge is labelled "French Threaded" or "Continental Thread" in Elkington & Co.'s pattern-books. It seems poised between Elkington's Classical inspired patterns of the late 1840s, after their



design partnership with Benjamin Smith 3rd broke down, and the French influence that Elkington & Co. increasingly adopted after 1851.

The threaded edge is designed in imitation of the silver drawn-wire edges found in the best designs of Sheffield plate. The earliest drawn-wire edges were used on holloware rather than flatware. They were made by drawing a thin piece of silver through a tool known as a 'worte plate,' or 'draw-plate.' This was a perforated metal plate, with holes punched into it at a forge, through which the wire was drawn to lengthen it and reduce its width. The draw-wire was then soldered on to the edges of fused-plate articles to conceal the cut shaped-edges of the copper and silver sheet metal.

In 1824, Samuel Roberts patented a method of filing and burnishing ornamental edges once they were soldered on such that any sign of the join disappeared, and the threaded edge appeared seamlessly part of the spoon. With the advent of electro-plating there was no need to conceal the copper edges of base metal articles because the entire finished assembly, however ornate and complicated its design and mountings, was simply coated with a thin plating or gilding in the electrolytic vat, which concealed every aspect of its manufacture. The threaded edge of the electroplated nickel silver teaspoon is not soldered on, but simply stamped into the solid base metal object before it is placed into the vat (Fig. 10).

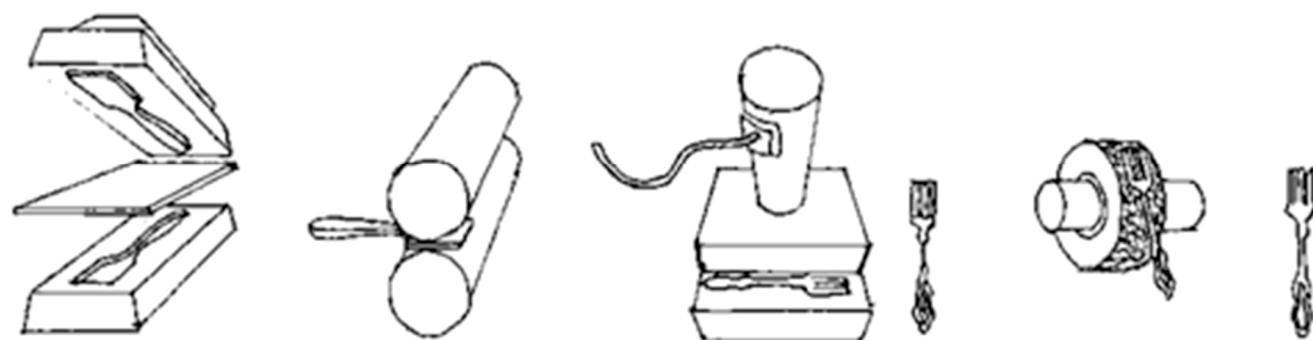
Writing in 1913, when fused-plate was becoming collectible and acquiring its prefix 'Old' Sheffield plate, Bertie Wyllie wrote about the perceived desirability of the thread edge: "Long ago, when I first started collecting what I then called 'Sheffield Plate,' and I wanted to teach my friends what to buy for me or for

themselves, I used to say to them, 'Every piece with the thread edge is worth buying.' Now after years of experience and the exceptional opportunities I have fortunately had of studying the subject, I know no better way to teach the unlearned what to buy than to repeat that sentence with a little difference. Buy any piece with a thread (properly called a drawn wire) edge if you are satisfied that it is genuine and in its original condition that is, not re-plated."⁴⁵

The Victorian Gold Rush

James Baines & Co. started the Liverpool-based Black Ball Line of Australian Packets in 1852, to carry emigrants to Melbourne during the Victorian gold rush.⁴⁶ In the year after the Great Exhibition, there were more tickets sold to immigrants leaving Britain for Melbourne than any other port in the world. Between 1852-1861, Melbourne grew from a small colonial backwater into one of the wealthiest cities in the world (Fig. 11). "The Mt Alexander goldfield opened up in November 1851, and is generally credited with triggering one of the greatest mass migrations in history. Australia had been known only as a convict colony on the distant side of the world until early in April 1852, when six ships carrying eight tons of Mt Alexander gold arrived on the Thames River. The ensuing rush to Mt Alexander was a defining moment in Australia's settlement, marking an irreversible shift from forced to voluntary immigration."⁴⁷

At the end of 1851, the population of Australia was 437,665, but a decade later by the end of 1861 it had almost trebled to 1,168,149. "The discovery of gold in payable quantities was an epoch-making event in Australian history, for as one writer [William Charles



Blank Cutting

Rolling

Pattern Stamped and Tines Cut

Polishing and Finishing

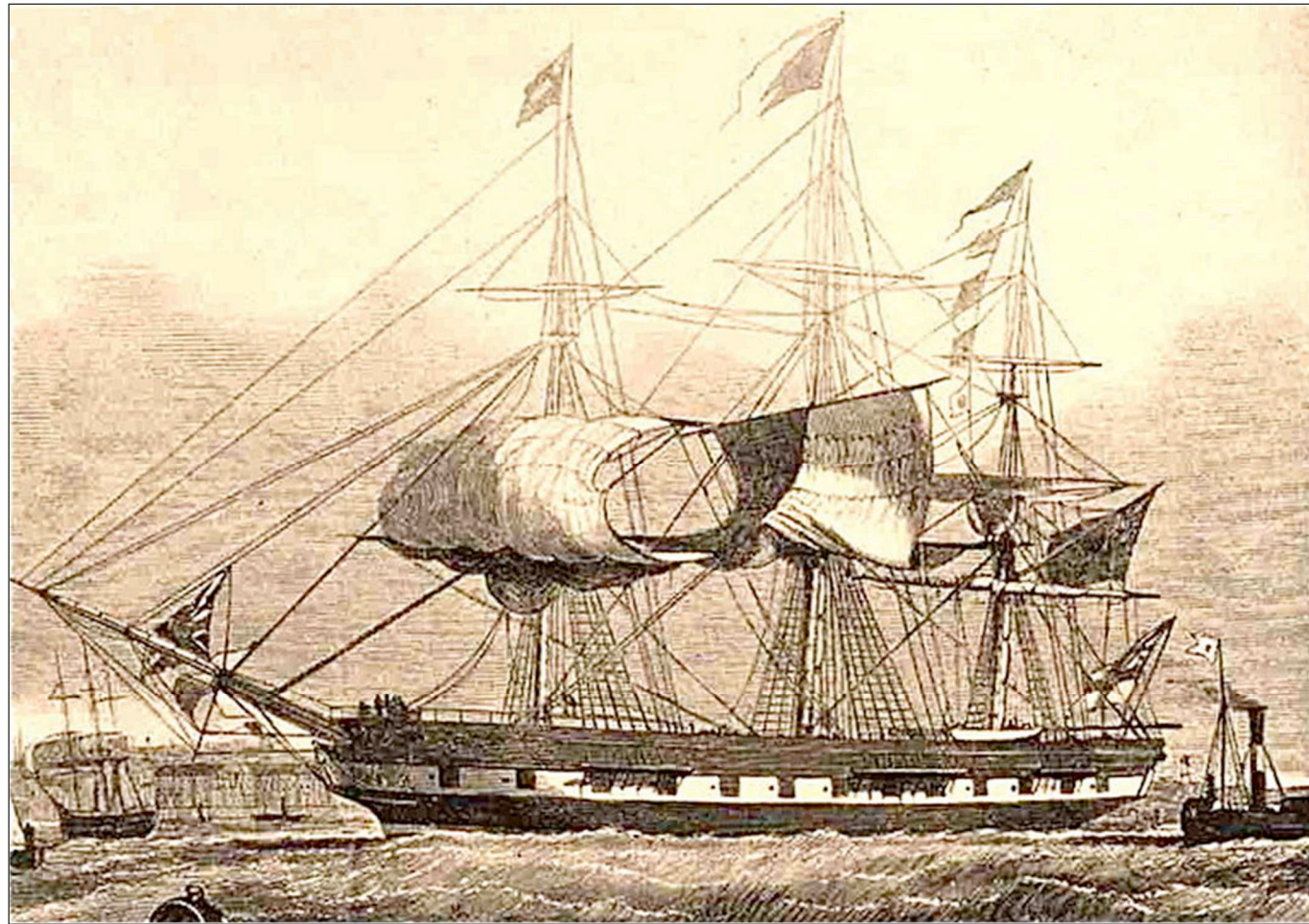


Fig. 12 "Marco Polo," illustrated in Basil Lubbock, *The Colonial Clippers*, James Brown and Son, Glasgow, 1921, Plate facing p. 27

Wentworth] aptly phrases it, this event "precipitated Australia into nationhood."⁴⁸

The huge influx of settlers and the wealth generated in and around the goldfields transformed Australia's architecture and colonial market for fine and decorative art. Melbourne's most prominent architects were all English-born and educated, and arrived in Melbourne between 1851-53. Joseph Reed (*circa* 1823-1890), Leonard Terry (1825-1884) and Lloyd Tayler (1830-1900), and J.J. [John James] Clark (1838-1915) were all, like John Ruskin, enthralled by the Classical and Renaissance architecture of Italy. Even if, unlike Ruskin, they had not absorbed Italy firsthand with the "eyes and no eyes" of a Grand Tourist, their architectural designs transfigured Roman villas and temples into colonial banks and mercantile offices.

Public fascination with the Victorian gold rush and import of Australian gold to Britain, in the wake of the Great Exhibition, provided a huge stimulus to the demand for decorative electro-plate and electro-gilt, not only in Britain but in emerging markets across the Empire. Clippers and packets that rushed migrants to the goldfields and freighted gold dust back to England also shipped cargoes of consumer goods to supply the growing demands of Australia's rapidly increasing population. Australian gold was used to electro-gild articles at Newhall-street then was shipped back 'down under' where the newly wealthy immigrants bought it.

On Friday 22nd October 1852, a notice in *The Argus* newspaper announced that a "Recent and extensive importation of Electro-plated goods, of the first class, from the eminent manufactory of Elkington and Co, of London had arrived in Melbourne." The town's leading ironmongers, Richardson & White of Collins-street, Melbourne had placed the advertisement. At the end of the advert the date of the notice was given as October 13th, a week earlier, which effectively urged prospective customers in the far-flung British colony to inspect the goods before they were snapped-up by others. "RICHARDSON & WHITE INVITE attention to the above, which comprises an almost endless variety of the most choice goods, in that universally approved patented invention electro-plating. Among the selection on hand will be found, a number of beautifully finished English oak peate [*sic*] chests, brass bound, containing a complete service for the dinner table."⁴⁹ The "cash price" for a canteen of cutlery and flatware was 60 guineas for a twelve-person service, 72 guineas for eighteen.

Richardson & White assured their prospective customers that, "Those articles have every appearance of the highest finished silver goods; for half a century will evade detection in respect of wear; will at all times fetch a fair proportion of their original cost, as in the case of solid silver, and at the above price, the cost is only equal to about two years' interest on the necessary

outlay for the same, if manufactured in sterling, silver." The sentence is a succinct summation of all that the aspiring and newly gentrified customers were looking for in a dinner service made in the new, but "universally approved" invention. It had every appearance of the best real silver, the social deception would remain undetected in their lifetime, cost a fraction of the real thing, and held its resale value if fortunes changed and times got tough. Also listed for sale from the same "extensive importation were: "Cruet and liqueur frames, salvers, tea-trays, fish carvers, soup ladles, cheese scoops, pickle-forks, toddy ladles, snuff boxes, bread and cake baskets, and every article for the table, of the same manufacture."

Richardson & White were offering all the fineries of European civilization to Australia's colonial society, but they were by no means the only outlets in Australia. *The Hobart Courier* of Thursday 19th April 1855, alongside an advertisement that announced, "The Celebrated Black Ball Line Of Australian Packets... Sail twice a month from England for Adelaide, Geelong, Melbourne, Sydney, Hobart Town, and Launceston," in magnificent clippers, "armed and fitted with bullion safes," and "with passengers, gold, and cargo," there was an advertisement for L.H. Lazarus, a watchmaker and jeweller of 46, Liverpool-street in Hobart Town, Tasmania. It proclaimed that Lazarus stocked "BEST PLATED-WARE From Elkington's, consisting of Cruets, Liqueurs, Tea and Coffee Services, Salvers, Cake Baskets, Snuffers and Trays, Chamber and Table Candlesticks, Toast Racks and Muffinneers in great variety and of elegant designs."⁵⁰

On 4th July 1852, Hugh Meickle, who was born at Paisley in Scotland, sailed to Australia on the three-masted wooden clipper ship *Marco Polo*, taking with him his wife, Magdalene (née McPherson) and their four children. The *Marco Polo* had been launched on 17th April 1851 from James Smith's shipyard at Marsh Creek in at Saint John, New Brunswick, designed to carry timber from Canada, or cotton from America to England (*Fig. 12*). However, the demand for ships to carry passengers to the Victorian gold rush in Australia meant that only a year after it was launched, *Marco Polo* was purchased bought by the Black Ball Line and was sumptuously converted to carry passengers between England and Australia. However, the luxury was reserved for first-class passengers, whilst those in steerage berths were squeezed below deck in cramped and unhygienic conditions. The Meikles would have travelled amidships in the married quarters, and may have only glimpsed the luxury afforded those in first-class. Fifty-one children and two adults died of measles and influenza in the icy conditions of the Southern Ocean on its first voyage. Amongst the children that died was the Meikle's youngest daughter, two-year old Mary.

The *Marco Polo* sailed from Liverpool to Port Phillips Head and into Melbourne on 12th September in a record 68 days, and, after a month's turn-around, returned on 11th October via the Cape Horn route to Liverpool, arriving on Boxing Day 1852, just 76 days

later. The total journey time was 5 months and 21 days, and was the first round-trip to take less than six-months to circumnavigate the world. Following its record-breaking journey, the *Illustrated London News* of 23rd February 1853 ran a feature on the *Marco Polo*, and its world-shrinking voyage, which included a reportage woodcut of the ship against the background of the Liverpool waterfront. The coverage in the popular press brought people from all over Britain to view the ship moored in Salthouse Dock with a canvas stretched between sails boasting "The Fastest Ship in the World." Its copper-clad hull was described as like that of a yacht broadening into a frigate above the water, a sleek design that made it faster than the modern steam packets. It carried back £100,000 in gold dust, including a nugget weighing 340 ounces that was a gift from the government of Victoria for the Queen. *Marco Polo*'s second journey back returned £280,000 of gold dust.⁵¹

The *Illustrated London News* gave a detailed description of the sumptuously appointed dining saloon of the *Marco Polo*, which was just forward of the ladies' cabin on the poop. To Victorian readers, it evoked the rapture of travel, a fast, luxurious voyage to find fortune in Britain's growing empire. "It is ceiled with maple and the pilasters are panelled with richly ornamented and silvered glass - coins of various countries being a novel feature of the decorations. Between each pilaster is a circular aperture about 6 feet in circumference for light and ventilation; over it is placed a sheet of plate glass with a cleverly painted picturesque view in the centre with a frame work of foliage and scroll in opaque colours and gold. The whole panels are brought out slightly by the rim of perforated zinc, so that not only does light from the ventilator diffuse itself over the whole but air is freely admitted. The saloon doors are panelled in stained glass bearing figures of commerce and industry from the designs of Mr. Frank Howard. In the centre of the saloon is a table or dumb-waiter made of thick plate glass, which has the advantage of giving light to the dormitories below. The upholstery is in embossed crimson velvet."⁵² Frank Howard (1805-1866) was painter, who had studied the Royal Academy before becoming the assistant of Sir Thomas Lawrence. After Lawrence died he made designs for the goldsmith Storr & Mortimer, later Mortimer & Hunt (1838-43) and then Hunt & Roskell (1843-97). In 1847, he moved to Liverpool where he taught drawing and lectured on art, and wrote articles on art for the local press, painting portraits and producing occasional designs for shipping companies based in the port.

In Melbourne, the 32-year old Hugh Meickle found work at Richardson & White, on Collins-street in Melbourne. After a year, at the ironmonger's, he went to try his luck at the Ballarat diggings and worked his mines there until 1855. In December 1854, he was involved in the Battle of the Eureka Stockade, the suppression of a rebellion against British colonial authority by Ballarat's gold miners, many of who had formerly been involved in the Chartist riots in Britain. However, unlike many of the miners, Meikle actually struck it rich. When he died aged on 28th August 1897,



Fig. 13 *Steam Yacht Sunbeam In Sydney Harbour*, glass plate negative (emulsion on glass), William Hall Photographic Studio, July 1887, W. 21.5mm x H. 16.4mm, Australian National Maritime Museum, Museum no. ANMS1092[211]. *Sunbeam* RYS was an iron-framed, three-mast topsail-yard schooner, with an auxiliary compound steam engine. The photograph may record the arrival of *Sunbeam* into Sydney Harbour on Monday 4th July 1887.

he had been a colonist for 45 years. His obituary in the *Bacchus Marsh Express* on Saturday 4th September 1897 described how "Messrs. Meikle, Dryden, Crighton, and others went to try their luck at the Ballarat diggings. They were among the first to try deep sinking, and were the first party who worked their claim by steam power, and the iron sinking cage. Their claim turned out so rich that it was called the jewellers' shop."⁵³

Meickle invested the winnings from his gold fossicking in 180 acres of grazing land thirty miles west of Melbourne, near Bacchus Marsh, Victoria, which he named 'Meikleriggs' and farmed successfully. After just over three years in Australia, Hugh Meickle went from selling Elkington's flatware at Richardson & White on Collins-street to buying it for his farmhouse in the Pentland Hills.

Hugh Meickle's success story was not at all typical of everyone that made the voyage from Britain to Australia in the 1850s. In the same year that Meickle left Scotland voluntarily to find fortune in Australia, a 17-year old labourer named Charles Bird was tried at Warwick on 5th January 1852, and transported to Australia for a term of ten years and two months. After leaving Plymouth on 5th January 1856 the voyage took

eighty-four days on the convict ship *William Hammond*, arriving at Fremantle in the Swan River Colony (Western Australia) on 29th March 1856. His crime was stealing silver forks.⁵⁴ Likewise, on 30th January 1852, William Honeychurch, aged 22, had arrived in Fremantle on the convict ship *Marion*. He had been tried at Dartmouth on 14th April 1849, and transported for a term of seven years, for stealing a silver spoon.⁵⁵

The real sense of luxury of the Black Ball Line teaspoon's design lies in its electro-gilded bowl, which vividly evokes the taste for gold of hopeful immigrants rushing to the Mount Alexander goldfields northwest of Melbourne in Victoria on the new regular, scheduled service provided by the packet ships. The simple 'thread edge' (two thin closely spaced lines) border motif that runs the entire length of both edges of the spoon's shaft provides the only decorative detail, and is an exercise in ornamental restraint compared to many of the designs shown in 1851. The simple thread evokes an austere continental classicism for the commercial utility of the modern packet trade, where speed of passage was paramount. It was a utilitarian reaction against the heavy forms and ornate decoration of Regency Classicism, which, despite a growing



Fig. 14 "Imperial Federation Map of the World, Showing The Extent of the British Empire in 1886," supplement, *The Graphic*, 24th July 1886.

scholarly understanding of ancient Greece and Rome, the Great Exhibition revealed was still the predominant, outmoded force in British silverware design.

The teaspoon also serves to represent the ephemerality of many Victorian business ventures abroad, because the banking crisis of 1866 forced the Black Ball Line to sell many of its magnificent sailing clippers.

Making The World All One

From 1860-1890, the Australian economy was remarkably prosperous. Australians, in skilled and unskilled trades, earned higher wages than their counterparts back in England, and elsewhere in the world. In a paper read to the Royal Colonial Institute in 1888, the Liberal politician, famed for his travels around the world on his luxury yacht *Sunbeam* RYS (Fig. 13), Thomas Brassey, said, "At the first port at which I touched in Australia I saw the navy in a condition of prosperity which has never been reached in the old country. ...In all industrial establishments in Sydney the wages are on an equally high scale."⁵⁶ Public consciousness of the British Empire may have begun with Sir Charles Dilke's bestselling book *Greater Britain*

in 1868. "Steam is making the world all one;" wrote Dilke, who, unlike Ruskin was no latterday Grand Tourist, but an exhilarated modern traveller.⁵⁷ By the 1880s, the idea of the Empire and its enduring future was central to British social and political debate. In 1884, Thomas Brassey, by then Lord Brassey, a prominent Liberal statesman and soon to be Governor of Victoria from 1895-1900, founded, with others, *The Imperial Federation League* in London, which soon had branches in Canada, Australia, New Zealand, and the West Indies, promoting the idea of a consolidated and confederated empire. Steam and the telegraph was preserving English national unity around the world, asserted Brassey, "...making England more and more the social centre of the Empire."⁵⁸ (Fig. 14)

Elkington & Co. opened a showroom in Sydney in June 1886. "During the present week Messrs. Elkington and Co., the widely known gold and silversmiths and electro-platers of London, Birmingham, Liverpool, Paris, and elsewhere, have opened at No. 352, George-street, what is certainly one of the most brilliant displays of the art jeweller's handicraft that is to be met with in Australia. The premises have been fairly besieged since their doors were thrown open on

Tuesday, and the collection of articles which are to be seen forms a sight in itself well worthy of view. The firm's representative (Mr. A. G. Dowler) arrived from England last October, especially to establish an Australian branch, and the buildings which he has secured temporarily, pending the erection of larger ones, have been artistically fitted and illuminated by Mr. J. Beeler, of Tattersall's Chambers, under the supervision of Mr. Albert S. Thompson, architect, of Pitt-street. The display of goods is, from its intrinsic and unique character, deserving of more than passing notice, seeing that it includes specimens of the very latest designs in gold, silver, bronze, electro, enamel, crystal, chinaware, jewellery, &c, fresh from the workman's hands."⁵⁹

The grand miscellany of electro-plated flatware, cutlery, and holloware emulated the dining saloons of the ships that had 'transported' several generations of Australians who transformed the country from a patchwork of penal colonies and free settlements (1788-1868) into a modern nation. An advertisement in the *Illustrated London News* of 16th April 1892 for Elkington's electro-plated spoons and forks lists their

addresses in Birmingham, London, Manchester, and Liverpool, and "...also at SYDNEY, MELBOURNE and CALCUTTA" (Fig. 15). Ultimately, as history has shown, it was not so much the political and legal administration of the British Empire, nor the English language and social mores that was "making the world all one," but the culture of luxury and consumption that was being relentlessly marketed around the world by multinational businesses and the ubiquitous brand recognition of their maker's marks.

Peculiarly English

No other travel experience has ever combined the modernity, luxury, and romance of a transatlantic crossing from the mid-19th to the early-20th centuries. For everyone that made the voyage, even the steerage passengers crowded into the cargo holds of the elegant steamships, it was poignant with the expectation of limitless opportunity. In 1868, Charles Dilke described New York's docks at night. "The harbor is illuminated by the coloured lanterns of a thousand boats, and the steam-whistles tell of a life that never sleeps."⁶⁰ On 18th January that same year, Thomas Ismay acquired the

Fig. 15 below. "Elkington & Co Ltd." Advertisement in the *Illustrated London News*, 16th April 1892.

CATALOGUES POST FREE ON APPLICATION.

ELKINGTON & Co^{LD}

ORIGINATORS and PATENTEES OF ELECTRO-PLATE.

SILVER SPOONS AND FORKS

at lowest prices, according to Market value of Silver.

ELECTRO-PLATED SPOONS AND FORKS,

GUARANTEED QUALITY From 30/- per Doz.

ELKINGTON AND COMPANY'S SPOONS AND FORKS ARE GUARANTEED TO BE THE BEST AND CHEAPEST MANUFACTURED.

GEORGIAN PERIOD

QUEEN ANNE PERIOD

QUEEN VICTORIA PERIOD

MANUFACTORY: BIRMINGHAM.

LIVERPOOL: CHURCH STREET.

MANCHESTER: St. ANN'S SQUARE

LONDON: 22, REGENT STREET & 42, MOORGATE STREET;

ALSO AT SYDNEY, MELBOURNE and CALCUTTA.

Fig. 16 facing page. "The Du Barry pattern" in *Elkington Plate and Silver*, no publisher or date, circa 1920, p.16.



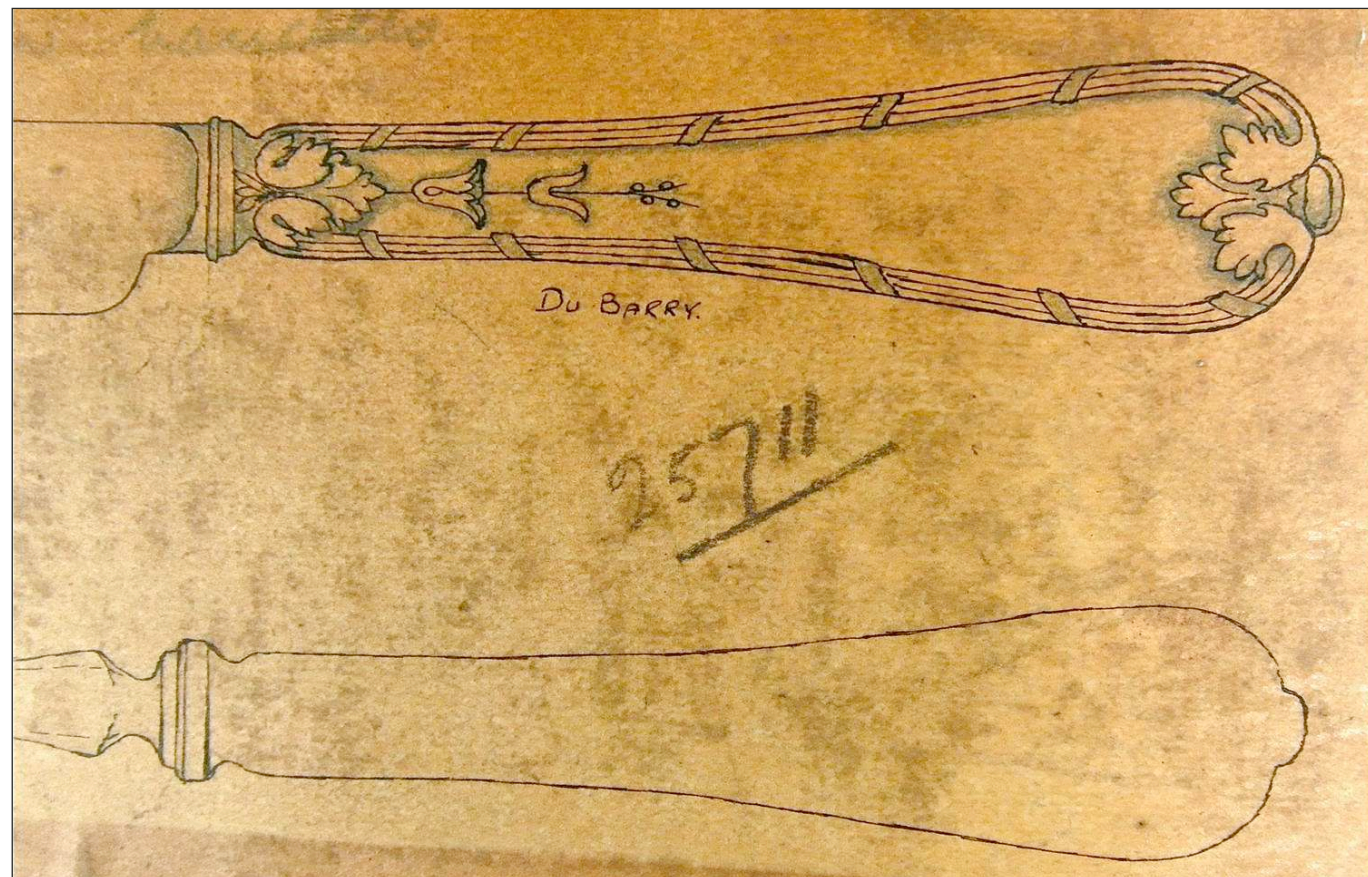


Fig. 17 above: "The Du Barry pattern" in Elkington & Co.'s Brearley Street Pattern Book. [1904-1939], Ref. AAD/1979/3/7/3, p. 186.

White Star Line, and, until 10th May 1934 when White Star merged with Cunard, the two shipping lines competed for pre-eminence on the route between Liverpool and New York. Cunard opted for speed, whilst White Star turned the transatlantic voyage into a luxurious experience. Elkington & Co. manufactured most of White Star's electro-plated flatware and cutlery.

When it sank in 1912, *RMS Titanic* took to the bottom of the Atlantic the ship's full complement of Elkington & Co. flatware and cutlery, much of it in their distinct "Du Barry" pattern, which the wealthier passengers had dined with during its brief, ill-fated voyage. Today there is little concord over what Elkington's "Du Barry" or "Dubarry" pattern actually looked like, how it is spelt, or indeed whether it was actually the pattern that was actually used on the *Titanic*. Flatware patterns vary widely in their historical descriptions, depending on what manufacturers and retailers think the contemporary market wants. Whilst there is broad agreement on the names of the parts of knives, forks, and spoons, there is still great variance in the identification of patterns.

The Sheffield flatware and cutlery manufacturer R.P. Day & Co. currently offer a version of Elkington's "Dubarry" pattern that they claim is the same as that used on *RMS Titanic*, and can even supply it "...with the original makers' branding... and with the White Star Line logo on if required."⁶¹ "Beware of imitations," their website warns customers!

Fig. 18 facing page: 'French Bolsters' in Elkington & Co.'s Brearley Street Pattern Book. [1904-1939], Ref. AAD/1979/3/7/3, p. 108.

However, the rather plain design that they advertise bears little resemblance to "The Du Barry" pattern depicted in Elkington's sales catalogues and pattern books, which was a complex "Ribbon and Reed" design (Fig. 16). The edge and transition of Elkington's "Du Barry" flatware design is fluted with fine lines to look like reeds, although the transition of the knife is not fluted. There are four diagonally crossed ribbons spaced along the handle of the flatware, and diagonally along the edges, which give the finely fluted lines the appearance of a bound sheaf of grain, or floral stems, tied with ribbons. This is accentuated by a delicate floral motif on the transition, resembling rye grass flowers, and a foliated motif repeated at the end of the handle and below the bolster.

According to White Star's publicity, the *À La Carte Restaurant*, which was exclusively for the use of first-class passengers, was decorated in the Louis XVI style. Despite the French name and décor the concessionaire that ran it was the London-based Italian restaurateur Luigi [Gaspere Antonino Pietro] Gatti. In London, Gatti ran two Ritz restaurants, the *Gatti's Adelphi* and the *Gatti's Strand*. On the *Olympic* and later the *Titanic*, he operated the *À La Carte Restaurant* with staff drawn from his two London restaurants. He died in the *Titanic* disaster on 15th April 1912.

In contrast, White Star described the Jacobean-style décor of the upper-class dining saloon of the *RMS Titanic* as "peculiarly English." Although the ribbon and

reed motif was 'peculiarly English,' the origin of the name "Du Barry" was not remotely Jacobean, or even English. Nor was it really Louis XVI, but strictly speaking was more Louis XV. Like the *Titanic's À La Carte Restaurant* and upper-class dining saloon, "The Du Barry" pattern was an eclectic, internationalist fusion of historicist styles and influences. It was named after Marie Jeanne Bécu, comtesse du Barry (1743-1793) a famous courtesan who became the *maîtresse déclarée* of Louis XV. The name of the pattern evoked the French *ancien régime* in all its decadent pomp. "The Du Barry" hinted at amoral liaisons, social pretense, fashionable extravagance and pretension, and specifically evoked the assumption of a new name and identity, which was perfect for a transatlantic voyage that took millions of Europeans to begin new lives in America, or wealthy Americans on a *de rigueur* trip to reconnect with their European ancestral roots. Several passengers on *RMS Titanic* are known to have travelled under aliases.

"The signature I adopted was a bold piece of falsehood..." wrote Jeanne Bécu in her *Memoirs of the Comtesse Du Barry with Minute Details of her Entire Career as Favorite Of Louis XV, Written By Herself*.⁶² But then her *Memoirs* were also a falsehood, as they were not "written by herself" but penned

pseudonymously by the novelist Baron Etienne Leon Lamothe-Langon. When she became the king's official mistress, the comtesse du Barry's presentation at the Court at Versailles on 22nd April 1769 was a famous pre-revolutionary spectacle in which crowds flocked to see the former Parisian prostitute, the commonest of commoners, socially elevated to a royal courtier.

Perhaps the inspiration behind the floral stems tied with ribbons that is used in the design of Elkington's flatware pattern is to be found in Chapter 3 of the comtesse du Barry's faux *Memoirs*, which were translated into English in 1903, in which it was recounted that after her first supper with Louis XV he sent her "...a bouquet of flowers tied round with a string of diamonds."⁶³ (Fig. 17)

When Elkington & Co. named that particular pattern "The Du Barry," in the early years of the 20th-century, there was a renewed vogue for designs that emulated the extravagance of the French *ancien régime* associated with Louis XV, and the early years of Louis XVI's reign, before the return to the later classically inspired style, which the French call the 'Transition.' The influence of French design echoes throughout Elkington's Brearley Street pattern books, where even a particularly extravagant bolster was named a 'French Bolster' (Fig. 18). The *Exposition Universelle* in Paris

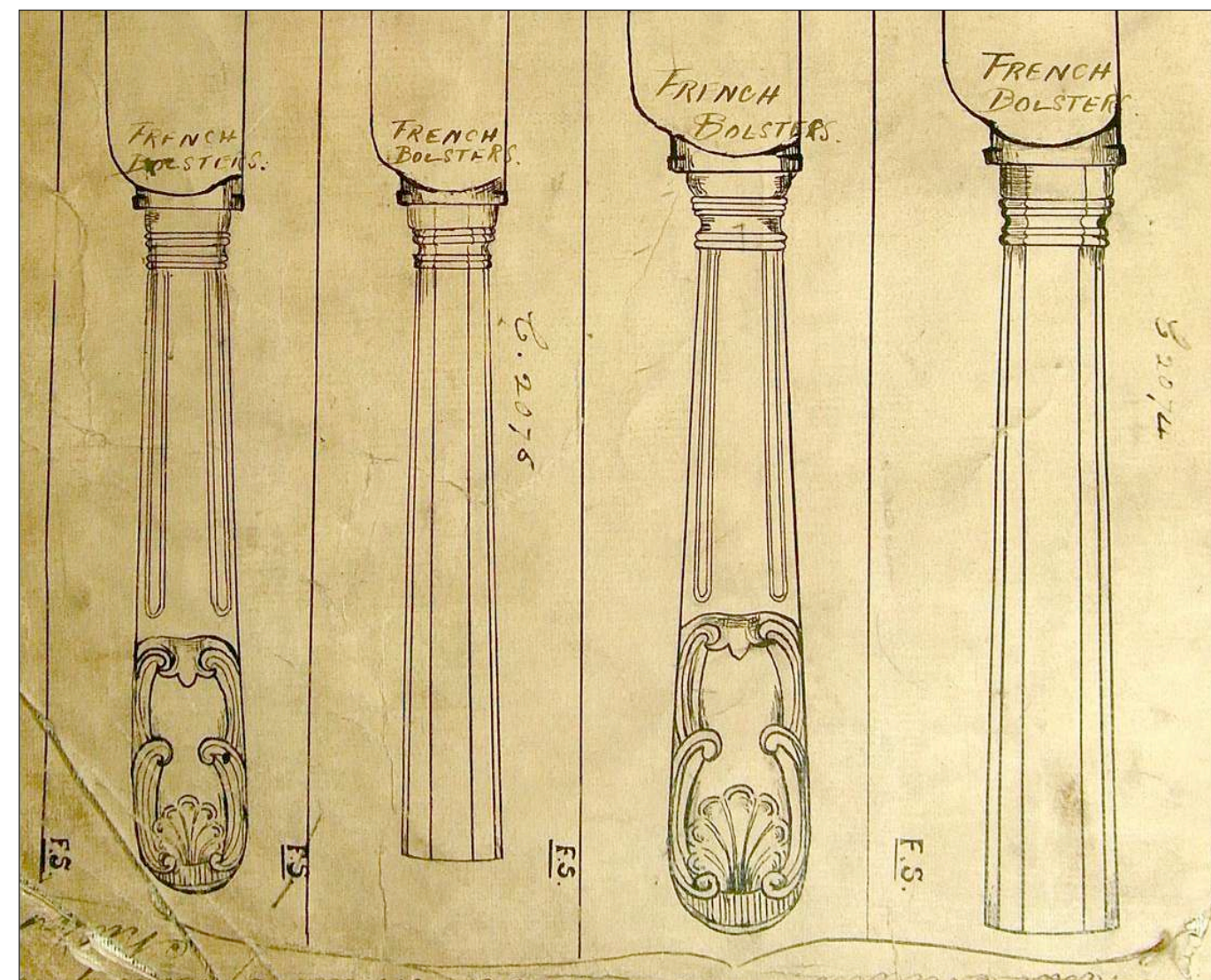




Fig. 19 "The Pompadour pattern" in *Elkington Plate and Silver*, no publisher or date, circa 1920, p.12

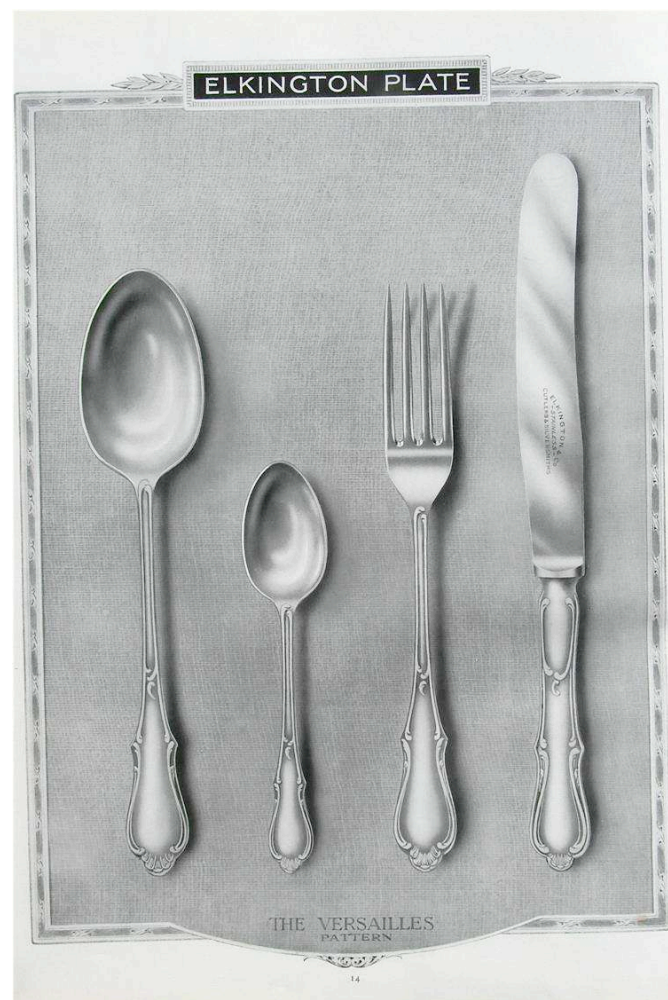


Fig. 20 "The Versailles pattern" in *Elkington Plate and Silver*, no publisher or date, circa 1920, p.14

and the opening of the Wallace Collection in 1900 revived interest in the original Rococo furnishings and decorative objects, and bought greater authenticity to reproductions of the style. The rococo-revival imitations of *circa* 1835-1870 had largely been vague pastiches of the original Rococo era's ornamental variety, gaiety, and grace, and were marketed primarily to the early-Victorian middle-classes. In contrast, the fin-de-siècle rococo-revival was a frivolous, self-conscious parody of the superficiality and hedonistic degeneracy of the original Rococo aesthetic, marketed to wealthy Edwardians who fashionably affected an affinity with its decadence. Other patterns that Elkington marketed alongside the "Du Barry" were named "The Pompadour" (Fig. 19) and "The Versailles." (Fig. 20)

Elkington & Co. also marketed a pattern named "The Empire," (Fig. 21) which was a pared down version of "The Du Barry," with a simple reed and ribbon edge, and only a small-foliated motif at the end of the handle of the knife. It is uncertain whether the pattern's name alluded to the British Empire, or evokes the neoclassical simplicity of the 1st French Empire style. The foliated motif appeared in the earlier design in the 1904 pattern book, which also had a pronounced bolster, but had been removed from the fork by the

time the 1920s sales catalogue was published. The simplification of the fork's design perhaps reflected the growing trend for removing decorative detail in the 1920s that followed the proclamation by the architect Adolf Loos in his various lectures from 1908, and published in 1910 as the polemical design manifesto "Ornament und verbrechen" in *Der Sturm*, which declared a lack of decoration as a prime signifier of modernity and social progress. The essay was translated into French and English (titled *Ornament and Crime*) in 1913.

Two other patterns offered in Elkington's sales catalogue were named "The Lucullus," (Fig. 22) after Lucius Licinius Lucullus (circa 117-57 B.C.) the imperial Roman general and politician who conquered the eastern kingdoms during the 3rd Mithridatic War, and "The Piastre" (Fig. 23). Both were clearly designed to appeal to the imperialist aesthetics of the élite civil service of the British Empire, or financiers and merchants in South Asia, and the shipping lines that served them. "The Piastre" originates from the Italian term for "plate," but the *piastre de commerce* was the currency of French Indochina from 1885-1952, and one of the last currencies to abandon the silver standard in 1930. Lucullus returned from the 3rd Mithridatic War (in

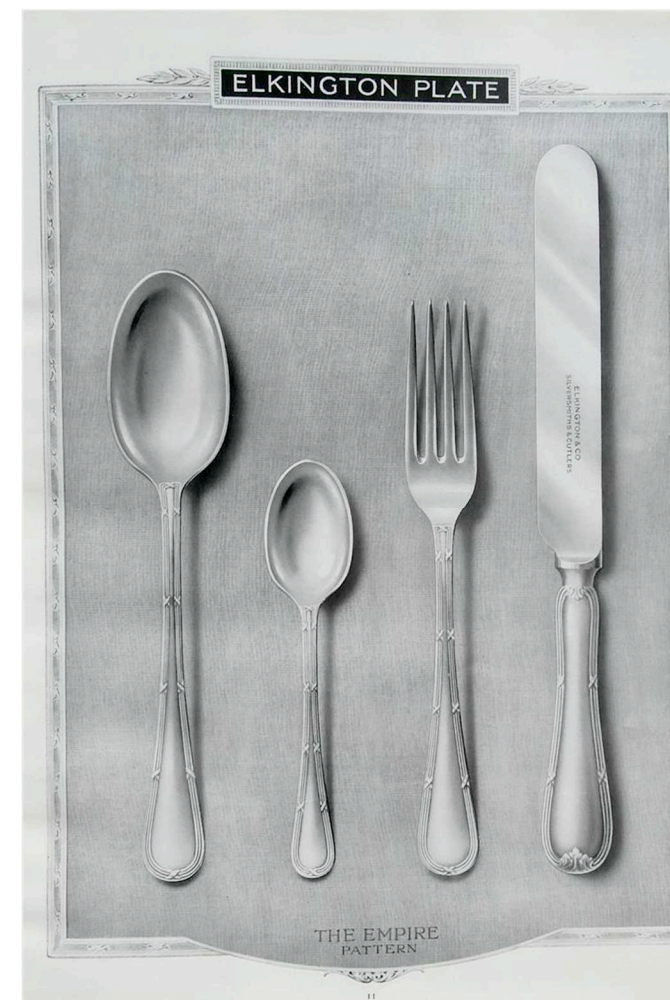


Fig. 21 "The Empire pattern" in *Elkington Plate and Silver*, no publisher or date, circa 1920, p.11

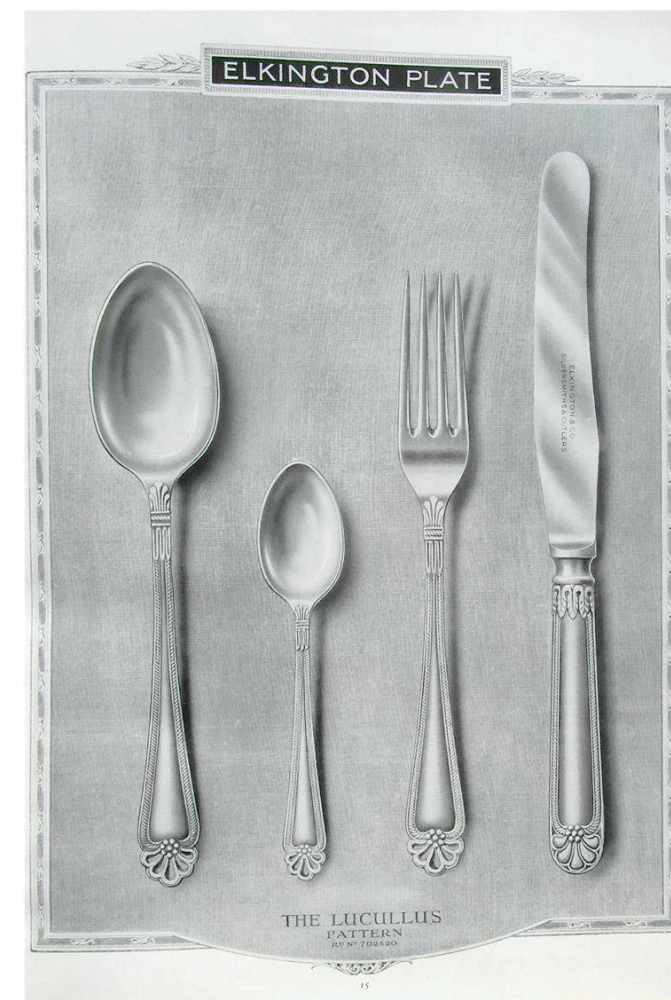


Fig. 22 "The Lucullus pattern" in *Elkington Plate and Silver*, no publisher or date, circa 1920, p.15

Armenia) with enormous plundered wealth and lived a life of extravagant luxury in Rome, where he became famed for giving sumptuous banquets. The word 'Lucullan' was first documented in 1861, and subsequently entered the English dictionary as an adjective used to describe luxurious food or a lavish feast. "The Lucullus" pattern appealed to higher ranks of the Imperial Civil Service, known as "Civilians," who had studied the Greats (*Literae Humaniores*) and knew their Roman history. The Macaulay Committee Report on the Civil Service, which created India's modern civil service in 1854, insisted that the top civil servants should have first taken a degree in arts at Oxford or Cambridge Universities.⁶⁴

In comparison with these six varieties of pattern offered by Elkington in the early 20th-century, Elkington & Co.'s earlier sales catalogue of circa 1886 presents eighteen flatware and cutlery patterns, and the names being marketed were far more traditional: Fiddle, Early English, Georgian, Trefoil, York, Kent, Star, Greek, Bead Antique, Queen Anne, Rich Beaded, Sydney, Threaded, King's, Threaded and Shell, and Lily. Only the name of the "Sydney" pattern evokes a specifically colonial aesthetic, which was clearly aimed at the Australian market.

From Ocean Liners To Airliners

There are three pattern books from Elkington & Co.'s Brearley Street flatware and cutlery manufactory in the Archive of Art and Design. They all date from circa 1900-1939, but many of the patterns documented in the books probably date back many decades earlier. They catalogue the bewildering array of flatware and cutlery patterns, and sundry domestic utensils that the company manufactured. This essay could as easily have focused on the equally bewildering array of flatware and cutlery patterns that Elkington & Co. supplied to the railway companies and hotels in Britain and across the British Empire. Like the National Maritime Museum at Greenwich, the National Railway Museum in York and Shildon has a collection of Elkington & Co.'s electro-plated and electro-gilded flatware, cutlery, and holloware that were used in the dining cars of trains and railway stations and hotels.

However, it was through the dining saloons of the great British steamship companies that the name of Elkington & Co. became globally synonymous with the aura of modernity and Victorian rapture with worldwide travel. It is striking that the Brearley Street pattern books contain pages of patterns for flatware and cutlery ranges made exclusively for particular shipping

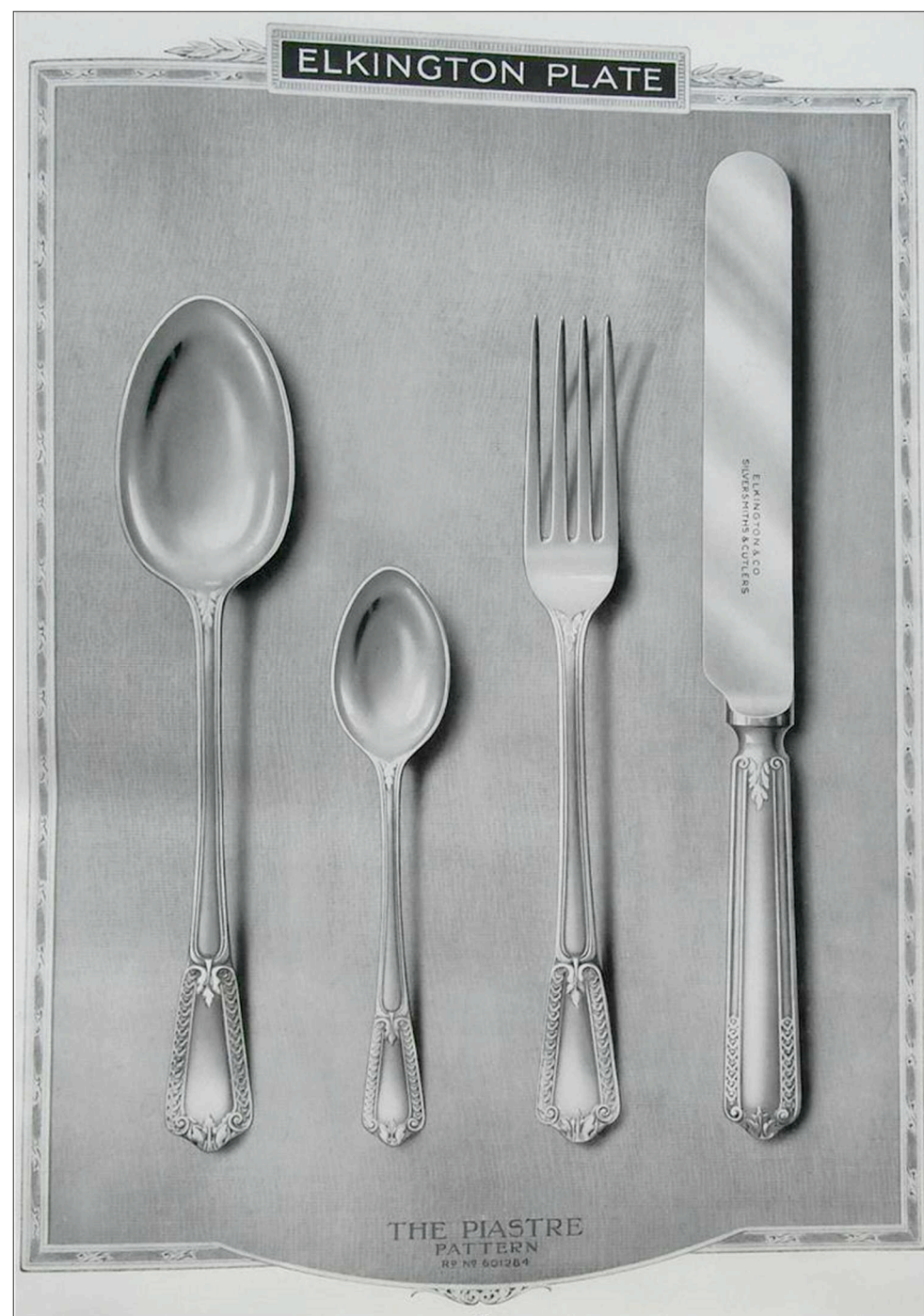


Fig. 23 left. "The Piastre pattern" in *Elkington Plate and Silver*, no publisher or date, circa 1920, p.13

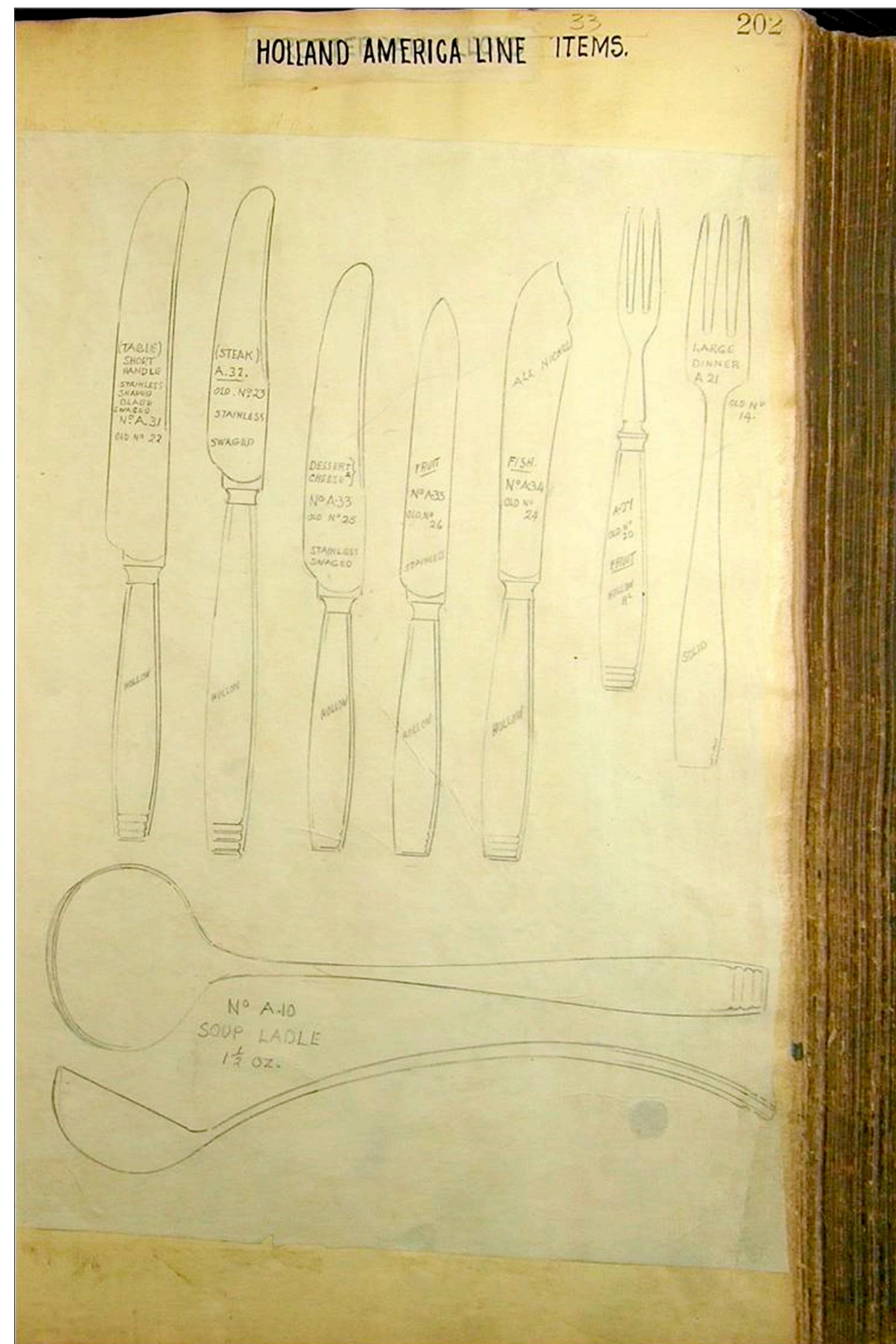
Fig. 24 facing page. "Holland America Line Items" in *Elkington & Co.'s Brearley Street Pattern Book*. [1904-1939], Ref. AAD/1979/3/7/3, p. 202

companies, including Cunard, Holland America Line (Fig. 24), Union Steam Ship Company (U.S.S. Co.), The Pacific Steam Navigation Company (P.S.N. Co.) (Fig. 25), and the Royal Mail Steam Packet Company (R.M.S.P. Co.). Alongside a design for the R.M.S.P. Co. that is dated April 1912, (Fig. 26) there is also a later design for the company's successor, Royal Mail Lines Ltd (RML), (Fig.27) which was created in 1932 and continued until 1965, when it was acquired by Furness Withy. This reveals that Elkington & Co. successfully retained the business of the Royal Mail shipping company from whom they received their "first extensive order" in 1841, for well over a century.

Clippers, steamships, and turbo-electric ocean liners were the primary mode of intercontinental travel until the late 1950s when airliners superseded them. In 1958, the world's first commercially successful airliner,

the Boeing 707, began regular scheduled flights between New York and London. That was the first year that more transatlantic passengers flew rather than sailed, but well into the 1960s it was still possible to sail worldwide from one seaport to another, transferring between different liners on regular scheduled long-distance point-to-point line voyages.

The National Maritime Museum at Greenwich has an electro-plated nickel alloy tablespoon made by Elkington & Co. more than a century after the Black Ball Line teaspoon with its gilt bowl and threaded edge. It was made in 1961 for White Star's great rival Cunard. (Fig. 28) The only decorative detail on an otherwise spartanly unornamented tablespoon is the shipping line's logo on the upside of the handle. 'THE CUNARD STEAM SHIP CO Ltd' is engraved in a garter around a lion rampant holding a globe, and above the garter is a



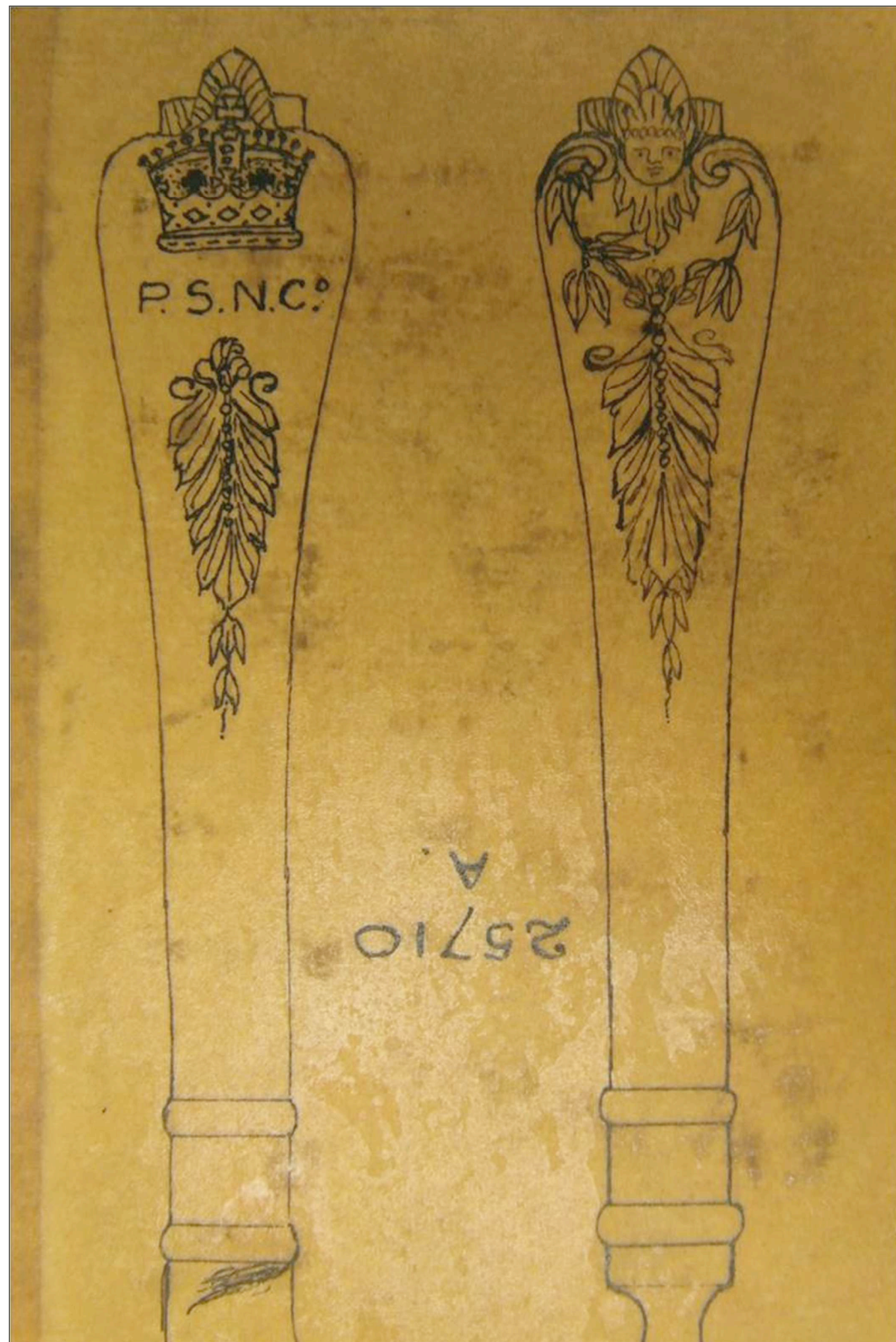
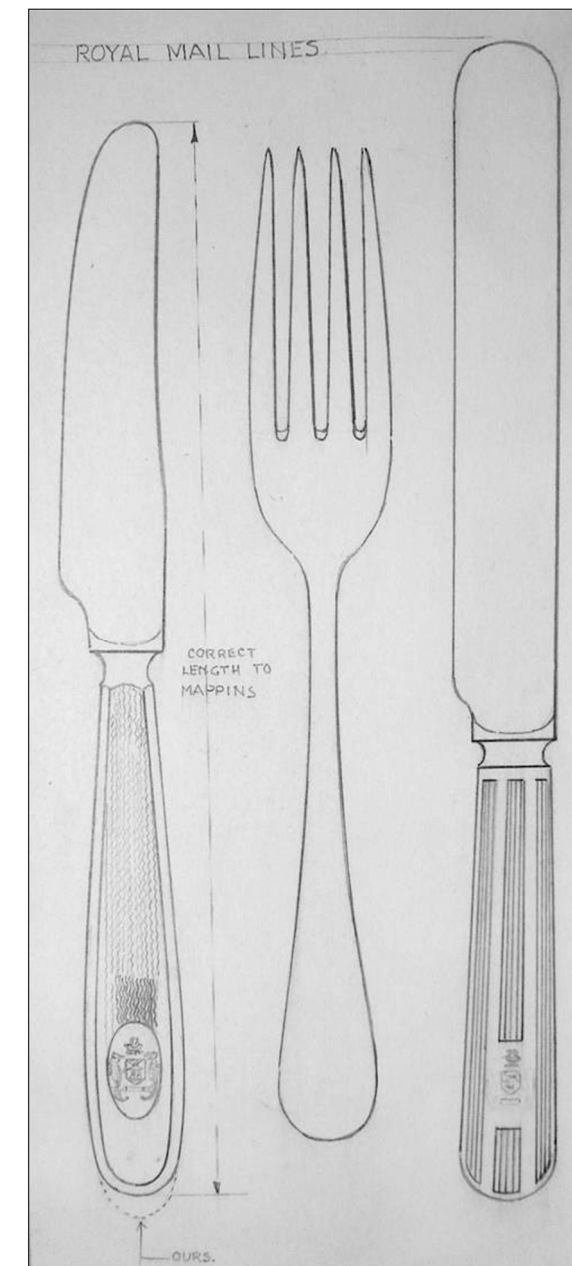


Fig. 25 facing page: "The Pacific Steam Navigation Company" (P.S.N. Co.) Elkington & Co.'s Brearley Street Pattern Book. [1904-1939], Ref. AAD/1979/3/7/3, p. 187

Fig. 26 above: "Royal Mail Steam Packet Co." (R.M.S.P. Co.), Elkington & Co.'s Brearley Street Pattern Book. [1904-1939], Ref. AAD/1979/3/7/3, p. 111

Fig. 27 right: "Royal Mail Lines," Elkington & Co.'s Brearley Street Pattern Book. [1904-1939], Ref. AAD/1979/3/7/3, p. 205



crown. The Cunard spoon of 1961 has the unadorned, metallic practicality of the jet engine's nacelle on a 707's wing. Like the electro-plated table fork used on board the *SS Pemba*, apart from some telltale damage to the plated surface, it could be made of stainless steel.

My extensive research into the history of Elkington & Co. and the art of electro-metallurgy has revealed how the company's artistic achievements developed out of the technical and industrial potentialities and sustained financial success of the electro-plated flatware and cutlery manufactured at Brearley Street. It seems like an uncanny narrative twist of history that the inventor of stainless steel was named Harry Brearley. In 1907, Brearley (1871-1948) became the head researcher at the Firth & Brown Research Laboratory in Sheffield, which was created following the merger of Thomas Firth & Son and John Brown & Co. Between 1908 and 1913, ahead of World War I, military expenditure in Britain and Germany increased by over 50%,⁶⁵ and Firth & Brown's metalwork research was essentially

part of the pan-European arms race in which materials science and industrial process became increasingly focused on weapons manufacture. On 13th August 1913, whilst experimenting to find a corrosion-resistant alloy for gun barrels, Brearley discovered Stainless Steel, an alloy containing 12.8% chromium and 0.24% carbon.⁶⁶

In 1943, in the middle of World War II, Mercury Securities acquired Elkington & Co. Ltd., whose commercial electro-plating operations had all but ceased with the firm's factories involved in manufacturing for the war effort. In 1950-51, Elkington & Co.'s famous Newhall Street and Brearley Street manufactories closed down, and the company's operations were moved to the Goscote Works in Walsall. In 1955, Mercury Securities disposed of its two subsidiaries, Elkington Ltd. and British Silverware Ltd., to the Delta Metals Group, and in 1963, just two years after the spoon was delivered to Cunard, Elkington & Co. effectively ceased to exist when it was fully merged into British Silverware Ltd.

Fig. 28 Tablespoon, electroplated nickel silver, Elkington & Co. Ltd., Birmingham, 1961, monogrammed, 'The Cunard Steam Ship Co. Ltd.,' Dim: 25 x 215 x 45 mm, National Maritime Museum, Greenwich, Museum no. PLT0506



Notes:

1. Elkington & Co., *On the Application of Electro-Metallurgy to the Arts*, J. King, London, 1844, p. 31.

2. Elkington & Co. Records, AAD/1979/3/1/2, p. 71: G.R. Elkington and Henry Elkington, British Patent No. 8447, *Coating, covering, or plating certain metals*

3. Elkington & Co., 1844, p. 31. G.R. and Henry Elkington filed their patent on 25th March 1840, specifying their method six months later on 25th September 1840.

4. *Thames, Isis, Medway*, and *Trent* were built at Northfleet; *Severn* and *Avon* were built at Bristol; *Tweed, Clyde, Teviot, Dee*, and *Solway* were built at Greenock; *Tay* was built at Dumbarton; *Forth* was built at Leith; *Medina* was built at Cowes.

5. See *The Ships List*: <http://www.theshipslist.com/ships/passengerlists/tweed1847.shtml> The website documents ships' passenger lists to America, Australia, British West Indies, Canada, and South Africa, immigration reports, shipwreck information, ship pictures, ship descriptions, shipping-line fleet lists, and newspaper records of maritime events.

6. See "Extracts from Charter of Incorporation Granted to the Royal Mail Steam Packet Company, Original Royal Charter Granted 26th September 1839," *A Link of Empire, Or 70 Years of British Shipping; Souvenirs of the 70th Year of Incorporation of the Royal Mail Steam Packet Company*, Royal Mail Lines Limited, London, 1909, pp. 11-26. See also: R.A. Fletcher, *Steam-Ships, The Story Of Their Development To The Present Day*, J.B. Lippincott Company, Philadelphia and Sidgwick & Jackson Ltd., London, 1910, pp. 189-191

7. Jean-Pierre-Joseph d'Arcet, Philippe Grouvelle, *Collection de mémoires relatifs à l'assainissement des ateliers, des édifices publics, et des maisons particulières*, Volume 1, L. Mathias (Augustin), Paris, 1843, p. 95. Translated from the French by Alistair Grant: "Depuis le époque de travail que précède, l'art de doreur sur bronze a éprouvé une immense revolution. Les procédés de dorure de le voie humide, et les procédés galvaniques qui servent à argenter, dorer, plater les autres métaux, ont réduit d'une manière si extraordinaire les prix de revient de la dorure, multiplié et varié si largement les ressources et les produits de cette industrie, qu'elle envahit, au moins en très-grandes partie, l'ancien travail par le mercure, mais sur un échelle bien autrement grande."

8. Elkington & Co. Records, AAD/1979/3/1/2, p. 71: G.R. Elkington and Henry Elkington, British Patent No. 8447, *Coating, covering, or plating certain metals*

9. Elkington & Co. Records, AAD/1979/3/1/4, p. 11

10. Elkington & Co., 1844, *Op. Cit.*, p. 23.

11. George Shaw, *A Manual of Electro-Metallurgy*, Simpkin, Marshall, and Co., London, 2nd edition, 1844, endpapers. Shaw gives an account of Prime's 'Magnetic Machinery' on pp. 55-65

12. Thomas T. Harman and Walter Showell, *Showell's Dictionary of*

Birmingham, A History and Guide, Arranged Alphabetically, Cornish Brothers, Birmingham, 1885, p. 64

13. Elkington & Co. Records, AAD/1979/3/1/4, p. 37

14. *Patents For Inventions. Abridgements Of Specifications Relating To Plating Or Coating Metals With Metals*, George E. Eyre And William Spottiswoode, Great Seal Patent Office, London, 1862, p. 45

15. John Percy, *Metallurgy: The Art of Extracting Metals From Their Ores, Silver and Gold - Part 1*, John Murray, London, 1880, p. 49

16. *Patents For Inventions*, 1962, p. 45

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